

**From:** [Peaceman, Karen](#)  
**To:** [Monsen, Dawn M.](#); [Harvey, Sanford W. \(EXTERNAL\)](#)  
**Cc:** [Nightingale, Elizabeth](#); [McIntyre, Cheryl](#)  
**Subject:** RE: Alreco Metals Site, Benton Harbor, Michigan  
**Date:** Thursday, August 14, 2014 4:24:30 PM  
**Attachments:** [MDEQ Reid Group LLC VN-005793.pdf](#)  
[Tobian BEA 1997.pdf](#)  
[Tobian BEA reveiw-1997.pdf](#)  
[Alreco file 1.pdf](#)  
[Alreco Consent Judgment 5 May 81.pdf](#)  
[Alreco Consent Order 11-16-82..pdf](#)

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Dawn,

I pushed "send" too quickly. Here are some more files. Let's touch base after you have had a chance to review these documents. We can talk through what additional information you are interested in.

Karen L. Peaceman  
Associate Regional Counsel  
U.S. Environmental Protection Agency  
77 W. Jackson Blvd., Mail Code C-14J  
Chicago, IL 60604  
312-353-5751

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**From:** Peaceman, Karen  
**Sent:** Thursday, August 14, 2014 11:43 AM  
**To:** 'Monsen, Dawn M.'; Harvey, Sanford W. (EXTERNAL)  
**Cc:** Nightingale, Elizabeth; McIntyre, Cheryl  
**Subject:** RE: Alreco Metals Site, Benton Harbor, Michigan

Dawn,

How about 3 pm CST? Thanks.

Karen L. Peaceman  
Associate Regional Counsel  
U.S. Environmental Protection Agency  
77 W. Jackson Blvd., Mail Code C-14J  
Chicago, IL 60604  
312-353-5751

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**From:** Monsen, Dawn M. [<mailto:dawn.monsen@klgates.com>]  
**Sent:** Thursday, August 14, 2014 9:12 AM  
**To:** Peaceman, Karen; Harvey, Sanford W. (EXTERNAL)  
**Cc:** Nightingale, Elizabeth; McIntyre, Cheryl  
**Subject:** RE: Alreco Metals Site, Benton Harbor, Michigan

Karen,

Thank you. Yes, I am available today after 1:00 pm EDT. Please let me know what time would work for you, and I can call you then.

Thanks,  
Dawn

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**From:** Peaceman, Karen [<mailto:Peaceman.Karen@epa.gov>]  
**Sent:** Wednesday, August 13, 2014 4:18 PM  
**To:** Monsen, Dawn M.; Harvey, Sanford W. (EXTERNAL)  
**Cc:** Nightingale, Elizabeth; McIntyre, Cheryl  
**Subject:** RE: Alreco Metals Site, Benton Harbor, Michigan

Dawn and Sanford,

Attached please find the Action Memorandum in the Alreco Metals as I promised. This was finalized last Friday and I only just received the scan of the final. I have the copy of the FOIA request you provided in your August 11, 2014 letter, but I have not yet seen the FOIA routed internally at EPA.

I would like to see if we can find a time to discuss this matter further so that we can expedite getting releasable, appropriate information to you. Is there a time tomorrow that would work?

Karen L. Peaceman  
Associate Regional Counsel  
U.S. Environmental Protection Agency  
77 W. Jackson Blvd., Mail Code C-14J  
Chicago, IL 60604  
312-353-5751

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**From:** Monsen, Dawn M. [<mailto:dawn.monsen@klgates.com>]  
**Sent:** Monday, August 11, 2014 4:41 PM  
**To:** Peaceman, Karen  
**Subject:** Alreco Metals Site, Benton Harbor, Michigan

Karen,

Please see the attached letter on behalf of Reynolds Metals Company in relation to the above site, which is being sent to Cheryl McIntyre via overnight mail.

Regards,  
Dawn



**Dawn M. Monsen, Esq.**  
K&L Gates LLP  
One Newark Center, 10th Floor  
Newark, New Jersey 07102  
Phone: +1.973.848.4148  
Fax: +1.973.848.4001  
[dawn.monsen@klgates.com](mailto:dawn.monsen@klgates.com)  
[www.klgates.com](http://www.klgates.com)

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RICK SNYDER  
GOVERNOR

STATE OF MICHIGAN  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
KALAMAZOO DISTRICT OFFICE



DAN WYANT  
DIRECTOR

April 7, 2014

CERTIFIED MAIL

Mr. Dorie Reid, President  
Reid Group, LLC  
P.O. Box 8711  
Grand Rapids, Michigan 49518

VN No. VN-005793

Dear Mr. Reid :

SUBJECT: Violation Notice

The Department of Environmental Quality (DEQ), Water Resources Division (WRD) and Remediation and Redevelopment Division (RRD) staff inspected Ace Co LLC, located at 900 Alreco Road, Benton Harbor, Berrien County, on April 1, 2014, to determine compliance with Part 31, Water Resources Protection (Part 31), and Part 115, Solid Waste (Part 115), of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA), and the Administrative Rules promulgated there under, as amended.

During the site inspection on April 1, 2014, WRD and RRD staff observed the unlawful exposure of industrial materials to storm water with a surface water discharge without required permit coverage. Ace Companies, LLC was previously covered by Industrial Storm Water Certificate of Coverage No. MIS310576, under General Permit No. MIS310000, which expired on April 1, 2013. The facility did not submit a Notice of Intent to renew permit coverage, and is currently lacking the required storm water permit coverage.

The exposure reportedly occurred after the collapse of a roof due to snow load during the winter of 2013/2014. Ash contained in the building had been removed and placed outdoors in large concrete bins. At the time of the DEQ's inspection, the ash was uncovered, and was exposed to storm water and wind. A pallet containing calcium chloride was also stored outside. The bags were torn, allowing the calcium chloride to be released to the pavement. In addition, several significant materials were found stored indoors in an unsecured building. DEQ staff observed several drums of oil and hydraulic fluid, and approximately 40 bags of baghouse dust. Due to the unsecured nature of the site, all significant materials should be removed immediately.

Catch basins on the site appear to flow to the wetlands adjacent to the Paw Paw River. No site map was available, and the property owner was not familiar with the ultimate discharge point of the catch basins. The catch basins had outflow pipes, indicating a discharge to surface water. The outfall could not be located, but is likely covered by tall cattails. Due to the exposure to ash, all catch basins located in the area near the ash

piles need to be protected with catch basin inserts designed to collect sediment. Completely sealing certain catch basins may be the preferred option due to close proximity to the ash piles.

In addition, the site inspection of April 1, 2014, indicated that ash, dust, grit, construction debris and metal scrap were disposed of at the facility. Disposal of solid waste is regulated by Part 115, of the NREPA. Dumping of solid waste at this location represents establishment of a disposal area without a license (MCL 324.11509), and failure to dispose of solid waste at a licensed facility (MCL 324.11512), both are violations of Part 115. Enforcement actions taken pursuant to violations of Part 115 may subject you to criminal and civil fines of up to \$10,000 per violation (MCL 324.11546 & MCL 324.11549).

The violation(s) identified in this Violation Notice are continuing.

The violations identified in the Violation Notice are violations of Part 31 of the NREPA and Part 115.

Reid Group, LLC should take immediate action to achieve and maintain compliance with the terms and conditions of Part 31 by obtaining a certified industrial storm water operator, developing a Storm Water Pollution Prevention Plan (SWPPP), implementing all nonstructural and structural controls contained in the SWPPP, and submitting the Notice of Intent for industrial storm water permit coverage.

In addition, Reid Group, LLC should take immediate action to achieve and maintain compliance with the terms and conditions of Part 115. Ash, dust and grit generated from furnaces associated with historic smelting operations at the facility are considered solid waste that must be disposed of at a licensed solid waste disposal facility or be properly recycled.

Please submit a plan with timeframe to this office by April 16, 2014. At a minimum, the response shall include:

1. Documentation (invoices, purchases orders, etc.) demonstrating that the following items have been purchased and/or ordered:
  - a. Tarps (or other impermeable covers) as necessary to cover all exposed ash piles, and
  - b. Catch basin inserts or cover plates for all catch basins to prevent ash from reaching waters of the state.
2. A detailed containment and removal plan (including specific dates) for the installation of the tarps and catch basin protection noted above, and the removal of all ash, drums, baghouse waste, calcium chloride, and any other significant materials from the site. The dates for plan implementation shall reflect the serious

risk the on-site materials represent to the environment, and therefore, represent the earliest date that your resources will allow completion of the work.

3. The date and location of the industrial storm water certified operator training that you have signed up to attend. Alternatively, you may hire a certified operator, and list his or her name and certification number.

If you have any factual information you would like us to consider regarding the violations identified in this Notice, please provide them with your written response.

We anticipate and appreciate your cooperation in resolving this matter. Should you require further information regarding this Notice or if you would like to arrange a meeting to discuss it, please contact either of us at Department of Environmental Quality, 7953 Adobe Road, Kalamazoo, Michigan 49009-5025 or by using the information below.

Sincerely,



Janelle Hohm  
Kalamazoo District Office  
Water Resources Division  
269-567-3581  
hohmj@michigan.gov



Mike Baranoski  
Kalamazoo District Office  
Remediation and Redevelopment Division  
269-567-3524  
baranoskim@michigan.gov

JH:MB:dmm

cc: Mr. Frank Ballo, Kalamazoo District Supervisor, RRD  
Ms. Bree Bennett, Kalamazoo District Office Enforcement Coordinator, RRD  
Mr. Barry Selden, Enforcement Unit, WRD

RECEIVED

MAY 27 1997

ERD - Plainwell

BASELINE ENVIRONMENTAL ASSESSMENT  
ALRECO METALS  
900 ALRECO ROAD  
BENTON HARBOR, MICHIGAN

Conducted Pursuant to Section 20126(1)(c)  
of 1994 P.A. 451, Part 201, as amended

Prepared for:

TOBIAN METALS, INC.  
350 Palladium Drive  
St. Joseph, Michigan 49085

Submitted by:

AARES, LIMITED  
5081 Wynn Road  
Kalamazoo, Michigan 49001

May 27, 1997

Soils beneath Tank farm  
Area contain w/PNA &  
Residential Criteria

Does not list  
the hazardous  
substances to be  
used and does  
not include  
MSDS's for these.

Why were all  
soil samples  
only field screened  
w/ PID

No comparison/contrast  
between the process  
used in the past and  
the process to be used  
by petitioners.

Alreco  
sediments @ the  
outfalls v. high<sup>for</sup> metals.

Maggie Fields

Concentrations of total and SPLP metals, BTEX compounds (benzene, toluene, ethylbenzene and xylenes) and PNA (polynuclear aromatics) compounds which exceed the *Generic Residential Cleanup Criteria* have been identified in soils at the subject property.

## 2.0 LAND USE

### 2.1 Former and Existing Land Use

The facility was constructed prior to 1968 by Michigan Standard Alloys as a secondary aluminum smelting plant. In 1981, Alreco Metals purchased the property from Michigan Standard Alloys. Alreco used the facility to process aluminum scrap metal of various alloys to produce three (3) primary finished goods. The finished products included remelt scrap ingots (R.S.I.) or "sows", 30 lb. ingots, and molten aluminum for over-the-road transport. Incoming scrap was off-loaded into the Main Production Building or was staged in the yard for temporary storage. Staged scrap was sorted based on aluminum content prior to preprocessing.

Preprocessing of oily and/or damp aluminum materials was performed using a chip crusher and a dryer. Materials containing significant quantities of iron ("cast", auto, and other large scrap) were processed through a screening/shredder/magnet operation prior to introduction into the furnaces for melting.

Sometime prior to 1981, the "dross" (skimmings or slag) from the melting process was deposited or landfilled on site along the eastern portion of the site. Subsequent to 1982, these materials were disposed at an "off-site" solid waste facility. The airborne particulate (baghouse dust) generated by the melting process was transported in ducts to the exterior of the building and captured in a multi-module dust collector system in super bags (baghouse) and disposed at an off-site facility. Sometime prior to 1982, the baghouse dust may also have been landfilled on the subject property with the dross.

A review of a 1982 aerial photograph revealed an earlier baghouse system located north of the main production building (currently the Tank Farm Area). A large overhead conveyor, visible on the aerial photo, originated at the former north baghouse and then extended in a northeast direction over the bluff.

Presumably, by-products of the operation were transported by the conveyor from the former north baghouse and deposited over the bluff on the northeastern portion of the site. According to Mr. Jerry Kirby, a former maintenance employee at Alreco Metals, surface soils and dross deposits in this area were excavated in 1981, and disposed at a solid waste facility. Evidence of earthwork in this area is visible in two 1981 aerial photographs. A area of recent earthwork activity is visible across the full width of the bluff, extending from the northwest corner of the site around to the east, and then south to the southeast corner of the property (along the bluff). This was further confirmed by the data contained in a consent judgement, which is discussed in greater detail in Section 3.3.

Review of a 1983 aerial photograph revealed that the north baghouse had been removed and was no longer present. Two (2) baghouse systems are currently present. One (1) large baghouse system is located on the southern central portion of the site and one (1) additional baghouse is located adjacent to the east exterior wall of the main production building. A review of subsequent aerial photographs indicate that the existing east baghouse system was constructed in approximately 1988. Copies of the aerial photographs are enclosed in Appendix C.

Historically, the dross generated at the facility is believed to have consisted primarily of aluminum, lead, zinc, and other metals, and existed in oxide as well as metallic particulate form. Sometime prior to 1982, substantial quantities of the dross material were deposited in the northeastern, eastern, and southeastern portions of the site.

All operations at the subject property were discontinued in 1995. The "on-site" structures were vacated by Alreco personnel and no production has occurred at the site since then.

## 2.2 Intended Land Use

The potential purchaser of the property, Tobian Metals, Inc., intends to use the facility for aluminum recycling, just as the previous owner had. However, Tobian intends that incoming scrap material, aluminum drosses, skimmings, etc. will be received in tote boxes, immediately off-loaded into the existing production building, and stored in raw material storage bins. Incoming materials will also be received in half-side scrap trailers that will be tarped and stored on site until ready for processing. No exposed raw materials or metal parts will be staged outside the production building or on the ground surface. Materials in the tarped scrap trailers will be off-loaded directly into the receiving building and transported to the furnace bins. The aluminum dross will be melted with an introduction of flux in two (2) rotary melting furnaces and poured into nominal 1000 to 1500 lb. R.S.I. "sows".

The waste slag from this melting process will be cooled and stored inside the building and then disposed at an "off-site" solid waste facility as a "non-toxic", "non-hazardous" special waste. The airborne particulate generated by the melting process will be captured in the existing multi-module dust collector system (S. Baghouse), and disposed at a solid waste facility. No waste material will be staged or stored outside of the main production building.

Future plans indicate that only two (2) of the rotary furnaces will be utilized. While the existing dryer may be reactivated, the shredder will not be used. Three (3) operational reverberatory furnaces are located in the main production building. Although it is not anticipated, the smallest of the reverberatory furnaces may be utilized in the future. The larger reverberatory furnaces will not be used.

## 3.0 SITE RESEARCH

AARES contracted EcoSearch Environmental Resources, Inc. (EcoSearch), to research various State and Federal databases for information on the subject property as well as surrounding sites

within a 1.3 mile radius. Additional research included a review of title documents, for information regarding past ownership of the subject property, and a review of aerial photographs. A summary of information collected in the research is provided in the following sections.

### 3.1 State and Federal Databases - Subject Property

A review of the EcoSearch report revealed that the Alreco property is registered in several databases, including CERCLA, RCRA Large Quantity Generator, ERNS, Toxic Release Inventory (TRI), Michigan State Priority List (SPL), Michigan Solid Waste Facility (SWF), and the Michigan Underground Storage Tank (UST) List.

A summary of information provided in each specific database is as follows:

#### 3.1.1 Comprehensive Environmental Response and Compensation Liability Act (CERCLA)

The CERCLA Database indicates that a Discovery Event and Preliminary Assessment for this site were completed in June, 1984 and October, 1986, respectively. The site was later delisted and was granted a No Further Remedial Action Planned (NFRAP) status. No other information was provided in the database.

#### 3.1.2 RCRA Large Quantity Generator

The Alreco facility is listed as a RCRA Large Quantity Generator. Reported wastes include cadmium, chromium, and lead. The data indicates several evaluations, violations, and enforcement actions between 1985 and 1992. The evaluations were performed by the State of Michigan. No specific violations are listed; with the exception of a Land Ban Requirement in August, 1992, and the enforcement actions were "Written Informal". No further information was provided in the research.

The data indicates that large quantities of cadmium, chromium and lead were generated during previous operations at the facility. Soil, groundwater, and floor dust samples collected during AARES investigation have been analyzed for these parameters. A comprehensive discussion of each of these contaminants is presented in Sections 4.3 and 4.6, respectively.

#### 3.1.3 Emergency Response Notification System (ERNS)

A release at the Alreco facility was reported in September, 1989. The data indicates that a release to the air (atmosphere) occurred during a fire in the plant. The material released was isolated cadmium/lead dust. It was reported that the fire department extinguished the fire and that a contractor containerized and disposed of the material. No further information was available.

The data also indicates that an earlier release of cadmium/lead dust had occurred at the facility.

AARES' investigations addressing metal contamination at the site is presented in Sections 4.3 and 4.6.

#### 3.1.4 Toxic Release Inventory (TRI) Data

Several substances were reported to have released to the atmosphere between 1987 and 1992. These substances included chlorine, copper, nickel, lead, hydrochloric acid, manganese, aluminum oxide, and zinc. The database also indicates that approximately 500 pounds of copper were released to the water between 1990 and 1992. No information regarding the point of the release was provided. Large quantities of nickel, lead, manganese, aluminum oxide, copper, and zinc were reported to have been transferred off-site for disposal. The specific quantities (lbs.) of materials released to the air and water, as well as the quantities transferred off site are provided in the data.

The data also indicates that large quantities of metals were previously released to the air and water. Particulate matter released to the air may have settled as residue or dust within the production building and on the ground surface throughout the property. A comprehensive discussion of metal contamination at the site is presented in Section 4.3.

#### 3.1.5 Michigan State Priority List (SPL)

The subject property appears on the Michigan SPL. The database indicates an on-site landfill as the source of contaminants. Three (3) pollutants are identified in the data and include PCBs, cyanide, and metals. Soil samples collected during the subsurface investigation were analyzed in the laboratory for each of these parameters. A discussion of the impact due to these contaminants is presented in Sections 4.3, 4.5, and 4.6.

#### 3.1.6 Michigan Solid Waste Facility (SWF)

The site is listed as a Solid Waste Facility. The status of the facility is listed as "inactive". This registration is presumed to be associated with the earlier "on-site" disposal of dross material. No further information was available in the database.

The research indicates that dross and intermixed waste material had been landfilled "on-site". Subsequent investigations which address contamination associated with this activity are presented in Section 4.3.

#### 3.1.7 Michigan Underground Storage Tank (UST) List

The database indicates that four (4) USTs were removed. However, information obtained from Alreco Metals and earlier investigations confirmed the 1988 removal of only three (3) regulated USTs from the former Tank Farm Area. A fourth, unregulated UST for heating fuel storage was also removed in 1988 with the regulated USTs. The heating oil UST was removed from the Office Area. Although unregulated, this UST may have been registered and could account

Soil samples for laboratory analysis were collected from each boring. The laboratory results indicated concentrations of PNA which exceed the *Generic Residential Cleanup Criteria* in both soil samples. Analytical results for soil samples collected in the Office Area are presented in Table 4, enclosed in Appendix B.

#### 4.2.2 Perched Groundwater Contamination in the Office Area

Saturated sandy soils were observed in both borings. The water appears to have accumulated above the deeper, gray clay. This data indicates that a perched water condition exists in this area. A sample of the perched water was collected from boring HA-1 (Heating Oil UST GW) and was submitted to the laboratory for analysis of the BTEX and PNA constituents. Soil boring HA-2 did not produce sufficient water for sample collection. The laboratory results for sample HA-1 indicate detectable concentrations of BTEX, however, the concentrations did not exceed the *Generic Residential Cleanup Criteria* for groundwater. Analytical results for perched groundwater samples collected in the Office Area are presented in Table 4, enclosed in Appendix B.

#### 4.3 Surficial Dross Deposits, Staged Metal Parts, Baghouse Operations and the Drainage System

The following discussions address the potential for Metal (aluminum, arsenic, barium, cadmium, chromium, copper, lead, manganese, mercury, nickel, selenium, silver and zinc), PCB and cyanide contamination associated with several areas on the property where hazardous materials have or may have been released, staged, dumped, buried and disposed. Elevated metal concentrations can be attributed to the previous on-site disposal of dross material, the on-site staging of metal scrap, discharges to the drain system, and fugitive dust generated at the baghouse collection systems. The potential sources include:

- 1) Dross material consisting primarily of metal oxides and metallic particulate which was historically deposited on and over the bluff on the eastern portion of the site;
- 2) Large quantities of metal parts which have been staged across the eastern and northern portions of the site for several years;
- 3) Release of fugitive dust and particulates at the baghouse collection systems; and,
- 4) Discharges from the drainage system to several outfalls located on the perimeter of the facility.

##### 4.3.1 Soil Contamination in the Vicinity of the Bluff

On November 25, 1996, AARES advanced a total of eight (8) surficial borings (Bluff #1 through Bluff #8) for the purpose of collecting soil samples at depths of approximately two feet (2').

The samples were collected across the bluff and were intended to address the potential for metal contamination in the shallow soils. A Site Plan showing Bluff Boring Locations is enclosed in Appendix A.

All samples were analyzed in the laboratory for total Michigan Metals and PCBs. As stated in Section 3.1.4, the Toxic Release Inventory (TRI) database identified releases of aluminum oxide, nickel, and manganese, in addition to Michigan Metals. The Michigan State Priority List (SPL) identified cyanide as a pollutant. Therefore, Bluff samples #1, #2, #3, #5, #6 and #7 were also analyzed for aluminum, nickel, manganese and cyanide. Laboratory results indicated concentrations of total metals which exceed Default Values in Bluff samples #1, #2, #3, #5, #6, and #7. Specific metals which were detected above the Default Values include aluminum, arsenic, cadmium, chromium, copper, lead, manganese, nickel, and zinc.

AARES requested SPLP analyses for all samples which exhibited metal concentrations exceeding the Default Values. The analytical results were either "non-detect" or below the *Generic Residential Cleanup Criteria* for groundwater, with the exception of nickel. Bluff #3 and Bluff #5 samples both detected SPLP nickel at 0.007 ppb (the residential cleanup criteria for nickel in groundwater is 0.005) This information suggests that although elevated metal concentrations are present in the surficial soils, the metals are not generally expected to leach to groundwater at levels which will exceed the *Generic Residential Cleanup Criteria*, and are considered to be protective of the groundwater beneath the site. Analytical results for soil samples collected in the Bluff Area are presented in Table 5, enclosed in Appendix B.

#### 4.3.2 Soil Contamination in the Vicinity of the East and South Baghouses

On November 25, 1996, AARES collected two (2) surficial soil samples in the vicinity of the East Baghouse (E. Baghouse #1 and E. Baghouse #2) at depths of approximately two feet (2'). An additional shallow soil sample was collected in the vicinity of the East Baghouse (E. Baghouse #3) and two (2) surficial soil samples were collected in the vicinity of the South Baghouse (S. Baghouse #1 and S. Baghouse #2) on March 21, 1997. A Site Plan showing Baghouse Soil Sample Locations is enclosed in Appendix A.

All samples were analyzed in the laboratory for the 10 Michigan Metals and PCBs. In addition, all baghouse samples were analyzed for aluminum, nickel, manganese and cyanide. Laboratory analysis of the baghouse soil samples revealed concentrations of total metals which exceed Default Values in all samples analyzed. No PCB compounds were detected in any of the samples. Metals which exceeded the Default Values include aluminum, cadmium, copper, lead, manganese, nickel and zinc. Analytical results for soil samples collected in the Baghouse Areas are presented in Table 6, enclosed in Appendix B.

AARES requested SPLP analyses for all samples which exhibited total metal concentrations exceeding the Default Values. Only two (2) of the shallow soil samples exhibited SPLP values which exceed Residential Groundwater Criteria. Laboratory results of the SPLP analyses indicated concentrations of lead which exceeded the *Generic Residential Cleanup Criteria* for

les crit for nickel  
in gwt is 0.1 ppm,  
not 0.005 ppm.

Pg-15

All soil samples in  
vicinity of baghouses  
detected the following  
metals ↑ Default vals:  
Al, Cd, Cu, Pb, Mn, Ni, Zn.

Groundwater (0.004) in samples E. Baghouse #2 (0.015) and S. Baghouse #1 (0.007). E. Baghouse #2 also detected SPLP nickel (0.06) above the *Generic Residential Cleanup Criteria* of 0.05. Although SPLP aluminum results were high, no health based criteria has been established.

This information suggests that although elevated metal concentrations are present in the surficial soils, the metals (with the exception of aluminum) are not leaching at levels of concern, and are considered to be protective of the groundwater beneath the site.

#### 4.3.3 Soil Contamination in the Vicinity of the Outfalls

Shallow soil samples were collected in the vicinity of the drainage system outfalls on March 21, 1997. A total of seven (7) shallow soil samples were collected at each of the outfalls (Outfall samples 001, 002, 003, 004, 005, 006 and 008) associated with the facility drainage system. A Site Plan showing Outfall Soil Sample Locations is enclosed in Appendix A.

All samples were analyzed in the laboratory for total Michigan Metals and PCBs. As stated in Section 3.1.4, the Toxic Release Inventory (TRI) database identified releases of aluminum oxide, nickel, and manganese, in addition to the Michigan Metals. Laboratory analysis of the outfall samples revealed concentrations of total metals which exceed Default Values in all samples except Outfall 004. Concentrations of cyanide were within the *Generic Residential Cleanup Criteria* for all samples, except for Outfall 004, and no PCB compounds were detected in any of the samples. Metals which exceeded the Default Values include aluminum, arsenic, barium, cadmium, chromium, copper, lead, nickel and zinc. Concentrations of lead exceeded Direct Contact Values in samples Outfall 001 and Outfall 006. Analytical results for soil samples collected in the Outfall Areas are presented in Table 7, enclosed in Appendix B.

AARES requested SPLP analyses for all samples which exhibited metal concentrations exceeding the Default Values. The analytical results were either "non-detect" or below the *Generic Residential Cleanup Criteria* for groundwater, with the exception of cyanide (0.21ppm) in Outfall 004. This information suggests that although elevated metal concentrations are present in the surficial soils, the metals are not generally expected to leach, and are considered to be protective of the groundwater beneath the site. Although SPLP aluminum results were high, no health based criteria has been established.

#### 4.3.4 Groundwater Contamination

Groundwater samples were collected from MW-3, MW-4, MW-5 in September of 1996 and were analyzed for the dissolved Michigan Metals. Groundwater samples were collected from MW-6, MW-7, and MW-8 in March of 1997, and were also analyzed for the dissolved Michigan Metals. Two (2) rounds of groundwater samples were collected from each of the six (6) monitor wells in May 1997, (May 2 and May 15). The samples were analyzed for the dissolved Michigan Metals plus dissolved aluminum, manganese and nickel. Analytical results from each of the sampling events for MW-3, MW-4, MW-5 and MW-7 did not report any dissolved metals.

All outfall soils  
samples ↑ Res Criteria  
for metals except  
Outfall #4.  
Outfall #4 ↑ Res  
for CN.

Concs. of Pb ↑ Direct  
Contact for Outfall #1  
+ Outfall #6.

Only Outfall #4 exceed  
Res Crit for Drinking  
Wtr for CN after  
SPLP analysis

E Baghouse #2 +  
S Baghouse #1 ↑  
Drinking Wtr Crit  
for Pb  
E Baghouse #2 ↑  
Drinking Wtr Crit  
for Ni

SPLP

which exceeded the *Generic Residential Cleanup Criteria*. A Site Plan showing monitor well location is enclosed in Appendix A.

MW-8 and MW-6 detected levels of dissolved arsenic and barium which exceeded *Generic Residential Cleanup Criteria*. The SPLP analyses indicate that arsenic and barium in the shallow soils should not leach. Since both arsenic and barium are not believed to be in the scrap metals and/or dross used in the recycling of aluminum, the dissolved arsenic and barium concentrations may be indicative of higher regional background values.

Laboratory results of groundwater samples collected on May 2, 1997, from MW-6 and MW-8 reported concentrations of dissolved manganese (2.3 ppm and 2.5 ppm, respectively) which exceeded the *Generic Residential Cleanup Criteria* for groundwater. Laboratory results of groundwater samples collected on May 15, 1997, from MW-6 and MW-8 also reported elevated concentrations of dissolved manganese. Based on this and the fact that these monitor wells are located downgradient of the main production building and east baghouse, it appears that prior on-site aluminum recycling operations may have released manganese (common in aluminum recycling operations) onto the surrounding soils and that the manganese has migrated to groundwater.

It is important to note however that in each case where soil samples were analyzed for SPLP manganese, manganese was not found to leach at levels which would exceed the *Generic Residential Cleanup Criteria*. This anomaly may be explained in any number of ways which include, but are not limited to, a high background concentration in this area, high levels of manganese in backfill material, historically buried manganese-rich waste material, etc...

Analytical results for Monitor Well groundwater samples are presented in Table 3, 3A and 3B, enclosed in Appendix B.

#### 4.4 Bulk Fuel Oil Tank and Fuel Pump House

A 250,000-gallon bulk fuel oil aboveground storage tank (AST) is located across the Chesapeake and Ohio Railroad Tracks, approximately 100 feet west of the Main Production Building. Underground supply piping extends from the tank to a fuel pump house located adjacent to the southwest corner of the plant. AARES conducted a subsurface investigation to evaluate whether a release from the bulk tank, the associated piping, or the fuel pump system occurred.

On November 22, 1996, and on March 21, 1997, AARES advanced a total of thirteen (13) hand-augered borings around the perimeter of the bulk fuel oil tank, along the supply piping, and adjacent to the fuel pump house. A Site Plan showing Soil Sample Locations Near The Bulk Fuel Oil Tank System is enclosed in Appendix A. The soil borings were drilled to depths of approximately six feet (6'). Soil samples were screened in the field for the presence of VOCs. Field screening did not indicate the presence of VOCs in samples collected along the supply piping or around the perimeter of the bulk tank. Field screening indicated the presence of petroleum hydrocarbons in sample Fuel Oil Pump House #1.

MW-6 + MW-8 ↑  
Re-drilling w/lt  
for Mn

K&D Environmental Services, Inc. (K&D) was contracted by Alreco to remove and dispose of this residue from the Main Production Building. The residue and metal fragments were vacuumed using a Vactor truck and collected in a twenty (20) yard vacuum box. A baghouse and filter system minimized airborne dust. When vacuum boxes were full, the collected residue was transported off-site for disposal at an appropriate solid waste facility. Records indicate that approximately 105 tons of residue material was removed from the interior of the building.

#### 4.7 Analytical Methodology and Results

AARES contracted Eagle Laboratories, Inc. of Wixom, Michigan and Brighton Analytical, Inc. of Brighton, Michigan to perform laboratory analyses. Analytical methods and method detection limits are in accordance with those established in the MDEQ guidance document, "MERA Operational Memorandum #6, Revision #3: Analytical Detection Level Guidance for Environmental Contamination Response Activities under Act 307 Rules", dated February 4, 1994.

### 5.0 LIKELIHOOD OF UNKNOWN CONTAMINATION

To date, extensive investigations have been conducted. These investigations have included research into previous site operations and subsurface sampling of soils and groundwater. Analytical parameters were selected to identify the presence of specific compounds or elements associated with each area of environmental concern. Comprehensive laboratory analyses have been performed including metals, PCBs, BTEX, PNA, and cyanide. Proper quality assurance and quality control measures were used in the laboratory. Therefore, the laboratory data should be considered reliable for quantification of known contaminants.

Research indicates that numerous hazardous and/or controlled substances have been previously used at the subject site. Laboratory data suggests that various metals and organic compounds have been released on the property. This information indicates that the potential also exists for a prior release of compounds which has not yet been identified by site investigations.

### 6.0 LIKELIHOOD OF FUTURE CONTAMINATION

Tobian Metals, the "potential purchaser", intends to use the subject property as an aluminum recycling facility. Planned operations at the site will be similar to those of the past, **however**, various engineering and physical controls will be implemented to minimize or alleviate the potential for future contamination of the soils and/or groundwater beneath the site. A description of such controls is presented in the following sections.

#### 6.1 Tank Farm and Office Areas

Three (3) previous USTs were removed from the Tank Farm Area and two (2) USTs were removed from the Office area. The facility is currently serviced by natural gas lines for heating purposes. No information to date suggests that any additional USTs are currently present on the

subject property. No future USTs for fueling operations are anticipated by Tobian Metals at the subject property.

The six (6) existing ASTs in the Tank Farm Area will be dismantled and removed from the site. It is likely that a new AST system will be installed and utilized in the near future. This AST system will fuel "on-site" equipment only, be less than 1,100 gallons in volume and would be installed under roof inside a building. To further ensure that commingling of petroleum products does not occur, petroleum products will not be used and/or stored in areas where known petroleum contamination has been discovered or suspected (tank farm area, office area and the bulk fuel storage area). Therefore, a subsequent release of petroleum products in these areas is unlikely.

## 6.2 Surficial Dross Deposits, Staged Metal Parts, Baghouse Operations, and Drainage System

Prior to 1982, substantial quantities of dross were reportedly deposited on the eastern portion of the site. In 1982, this material was excavated and transported off-site for disposal. All dross generated by future smelting operations will be stored inside the existing building until transport to an off-site solid waste facility. Airborne particulate will be collected in the existing South Baghouse in dedicated superbags to prevent fugitive emissions. Once full, the bags and dust will also be transported off-site for disposal.

Various scrap metal parts including bins, cylinders, and slag were previously staged on the northern, eastern, and southern portions of the property. These materials have been removed by Alreco and disposed at a solid waste facility. Future incoming scrap material will be received in tote boxes and immediately off loaded into the existing Main Production Building. Incoming materials which are received in half-side scrap trailers will be tarped and temporarily stored on-site until ready for processing. These materials will then be off loaded directly into the building and transported to the furnace bins in the furnace area. No exposed materials will be staged on the ground surface outside the production building.

Future operations will include implementation of general housekeeping measures to prevent the accumulation of metallic particulates within the building. Any significant accumulation of residue or spillage will be immediately collected in slag pans and reintroduced to the furnace charging bin. This will minimize the potential for discharge to the floor drains and drain outfalls. Based on this information, a future release of metal contaminants to surface soils appears unlikely.

## 6.3 Bulk Fuel Oil Tank and Fuel Pump House

AARES subsurface investigation did not indicate the presence of soil contamination in the vicinity of the Bulk Fuel Oil Tank, the associated supply piping, or the Fuel Oil Pump House. The tank was gauged and was found to be empty. The subject site is currently connected to natural gas lines and no future use of this Fuel Oil system is planned. Therefore, a future release of fuel oil associated with this system is unlikely.

## 7.2 Existing Contamination

### 7.2.1 Known Metal Contamination

Elevated concentrations of metals have been identified across the site. Future operations include processing raw aluminum and metal materials. Metals which have been detected at levels which exceed Default Values include aluminum, arsenic, barium, cadmium, chromium, copper, lead, manganese, nickel and zinc. These indicator elements are of specific concern to this BEA because future process materials and by-products are likely to contain the exact same elements. Therefore, a rationale is necessary to distinguish between the impact of a potential new release and the existing contamination.

The known metal contamination is present in the shallow soils across the entire bluff area, baghouses and outfalls. These specific source areas have been investigated, in the event of a release, any impact could be differentiated from the existing contamination by using the present analytical data. If a new release is suspected, soil samples would be collected near the suspected release source area and analyzed in the laboratory for the indicator elements. Laboratory results for total metal concentrations could then be compared to the maximum concentrations of indicator metals collected as a part of this BEA submittal.

The indicator elements are heavy metals. Metals are naturally-occurring and can generally be considered stable and immobile. This fact assures that a future sampling event should be able to detect increases in contaminant concentrations. In this circumstance, data collection alone should be adequate to satisfy the requirements of a Category "C" BEA.

If the laboratory results of future sampling events exceed the maximum concentrations of samples collected prior to the BEA, then significant evidence of a potential new release exists. Because the metal contaminants are widespread across the site and can be naturally-occurring, a formal statistical approach would be necessary to substantiate any impact from a new release. Statistical methods may include T-tests, analysis of variance, tolerance factors, etc., and should be performed in accordance with the MDEQ guidance document, "Verification of Soil Remediation", April 1994, Revision 1. If the statistical analysis substantiates a new release, the future owner/operator may be liable for any necessary response activities associated with this new release.

### 7.2.2 Known Petroleum Contamination

Subsurface investigations have also identified PNA which exceed the *Generic Residential Cleanup Criteria* in the soils beneath the Tank Farm Area and the Office Area. BTEX and PNA concentrations which exceed the *Generic Residential Cleanup Criteria* are also present in what is believed to be perched water beneath the Tank Farm Area. The USTs previously located in these areas have been removed and no additional petroleum sources in this area were.

Any future release of petroleum products would be isolated spatially from the areas of the past

release(s). This should prevent commingling of contaminants and allow differentiation of subsequent contamination from the existing contamination.

Based on the location and small quantities to be stored, any potential future spill should be contained by either the concrete floor of either building or by the exterior concrete paving. Appropriate emergency response activity would make it unlikely that such a release will have any impact on the existing contaminated areas.

### 7.2.3 Unknown Contamination

Due to the nature of the recycled aluminum processes, widespread heavy metal contamination is likely in several areas which have not been sampled. Based on the number and locations of the samples collected from areas most likely to demonstrate heavy metal contamination for this BEA, it seems prudent that a "worst case scenario" of metal contamination on the property has been demonstrated. Therefore, the same method for determining a new release from an old release presented in Section 7.2.1 would apply in any area on the property where a new release is suspected.

Based on AARES background research of the property including a title search, aerial photograph interpretation, MSDS review, interviews and site walk-through, the potential for contamination from a source other than that set forth in this document is minimal. The subject property has always been used as a aluminum recycling facility and the hazardous materials used and/or generated have been well documented. It is unlikely that additional hazardous substances were utilized in significant quantities that would warrant any additional investigation.

## 7.3 Exacerbation

This property has been classified as a facility. Since contamination of hazardous substances has been identified and quantified, it is required that any future owner take measures to prevent exacerbation of the existing contamination. The following sections below will show that steps will be taken such that any future use of the property will not adversely impact or spread the existing contamination.

### 7.3.1 Future Use

The future use of the facility includes aluminum recycling, in a manner somewhat similar to past operations. In past operations, waste material were staged on disposed on-site and incoming scrap materials would occasionally be stored (uncovered) in various locations on the property. Future incoming scrap material, aluminum drosses, skimmings, etc. will be received in tote boxes, immediately off-loaded into the existing production building, and stored in raw material storage bins. Incoming materials will also be received in half-side scrap trailers that will be tarped and stored on site until ready for processing. No exposed raw materials or metal parts will be staged outside the production building or on the ground surface. Materials in the tarped scrap trailers will be off-loaded directly into the receiving building and transported to the furnace

bins. The aluminum dross will be melted with an introduction of flux in two (2) rotary melting furnaces and poured into nominal 1000 to 1500 lb. R.S.I. "sows".

The waste slag from this melting process will be cooled and stored inside the building and then disposed at an "off-site" solid waste facility as a "non-toxic", "non-hazardous" special waste. The airborne particulate generated by the melting process will be captured in the existing multi-module dust collector system (S. Baghouse), and disposed at a solid waste facility.

### 7.3.2 Existing Infrastructures and Site Conditions

The site consists of a large asphalt parking lot for employee parking, an office area attached to main production building, a maintenance building, three (3) electrical transformers, an AST tank farm containing six (6) tanks, a 250,000 gallon AST, four (4) baghouses, several concrete pads and drives and several smaller buildings/sheds. The Chesapeake and Ohio railroad crosses the property and two (2) spurs off of the rail have historically provided the main production building with rail service.

The property also utilizes it's own stormwater drain system. The system is divided into seven sections, all of which discharge to outfalls located in the wetland area, below the buff. This system utilizes drains located inside and outside of the main production building. The stormwater drain system is further discussed in Section 7.3.5.

The office area is consists of several carpeted offices with drywall and suspended ceiling tiles. During the walkthrough it was evident that the roof leaks in several locations in the office area.

The maintenance building contains an office area, restrooms, a parts room and several sectioned bays for various uses including vehicle maintenance, storage and construction.

The main production building houses one (1) shredder, one (1) dryer and four (4) furnaces. The roof has several holes and allows significant quantities of rainwater/snow melt-off into the building.

Several utility conduits run throughout the property. None of these conduits were investigated as part of this BEA.

### 7.3.3 Proposed Improvements, Additions and/or Modifications to Infrastructures and Proposed Construction/Demolition

Tobian Metals plan to repair the roof in both the office area and the main production building. In addition, it is planned that the shredder, several furnaces and miscellaneous equipment will be sold and removed from the property.

It is likely that an AST system will be utilized in the near future. This AST system will fuel "on-site" equipment only, be less than 1,100 gallons in volume and would be installed under

roof inside a building. To further ensure that commingling of petroleum products does not occur, petroleum products will not be used and/or stored in areas where petroleum contamination has been discovered or suspected (tank farm area, office area and the bulk fuel storage area). No future fueling system is planned underground and/or outside of the building. Limited quantities of petroleum products for general maintenance may be present at the site, however, plans provide that these products will be containerized and stored properly within the maintenance building.

#### 7.3.4 Stormwater System and Discharge Points

Elevated levels of various total metals have been detected in all of the storm drain outfall areas, except for outfall area #004. Even though a leachate test showed that all of these metals, with the exception of aluminum, are relatively immobile and are not expected to leach to groundwater, all of the storm drains inside the building will be filled to prevent any additional materials from the aluminum recycling process to enter the storm drains and impact or exacerbate the detected contamination at the outfalls.

Existing storm drains outside of the main production building which mainly collect rainwater from covered surfaces will be utilized to prevent ponding and eventual runoff in the covered areas.

#### 7.4 Due Care and Prevention

As mentioned earlier in Sections 6.2 and 6.4, several engineering controls will be utilized to prevent further generation of dust containing heavy metals. The entire production process from receipt of the raw products for recycling to the disposal of generated waste and by-products, will be performed under roof in the main production building.

USTs containing petroleum products will not be utilized on the property. Future petroleum use will be limited to an AST containing diesel fuel. The AST system will utilize secondary containment and will be located under roof inside of the main production building.

Outfall 001 and 006 both exhibited levels of lead above the direct contact criteria as set forth in MERA Memorandum #8, Revision #4. Tobian Metals will fence these areas to restrict access. In addition, notices will be posted on the fences and will identify and notify the nature of the contaminants present. It is important to note that the entire property utilizes a perimeter fenced to prevent un-authorized access to the entire property.

No other exposure pathways were noted.

#### 8.0 CONCLUSIONS

The Alreco Metals site has been determined a "facility" as defined in Section 20120a(1)(a) of the Natural Resources and Environmental Protection Act, P.A. 451 of 1994, as amended.

Concentrations of metals and PNA compounds which exceed the *Generic Residential Cleanup Criteria* have been identified in soils at the subject property.

The existing metal contaminants at the subject property can generally be considered stable and immobile. This information assures that a future sampling event would be able to detect an increase in contaminant concentrations. If increased concentrations are detected, a formal statistical evaluation could be used to determine if a new release occurred. Therefore, a means to differentiate a new release from the existing contamination is provided.

PNA compounds have been identified at concentrations which exceed the *Generic Residential Cleanup Criteria* in soils beneath the Tank farm Area and the Office Area. BTEX and PNA concentrations which exceed the *Generic Residential Cleanup Criteria* are also present in the perched water beneath the Tank Farm Area. The USTs previously located in these areas have been removed. Six (6) ASTs currently located in the Tank Farm Area are scheduled to be removed.

It is likely that an AST system will be utilized in the near future. This AST system will fuel "on-site" equipment only, be less than 1,100 gallons in volume and would be installed under roof inside a building.

To further ensure that commingling of petroleum products does not occur, petroleum products will not be used and/or stored in areas where petroleum contamination has been discovered or suspected (tank farm area, office area and the bulk fuel storage area). No future fueling system is planned underground and/or outside of the building. Limited quantities of petroleum products for general maintenance may be stored and used at the site, however, these products will be containerized and stored properly within the maintenance building. Isolation of petroleum products will prevent any potential new release from commingling with the existing contamination.

Based on extensive investigation, this document is intended to provide the data necessary to satisfy the Minimum Technical Standards for a Category "C" BEA. The existing contamination has been quantified and a means of distinguishing future contamination has been provided. Therefore, AARES, on behalf of Tobian Metals, formally requests an affirmative determination on this BEA.

**MDEQ-ERD REVIEW/APPROVAL DOCUMENT  
PLAINWELL DISTRICT QUALITY REVIEW TEAM**

Site Name and County: ALRECO Metals, <sup>Berrien</sup>~~Allegan~~ County

Project Manager/Presenter: Jeff Spruit

Is the Site on the 307 List?: Yes

Site ID Number?: 110021

Purpose of the Presentation (Closure, RAP, Etc.): Category C BEA Determination

**BRIEF Review of the Site History/Facts Presented:**

The facility was constructed prior to 1968 by Michigan Standard Alloys (MSA) as a secondary aluminum smelting plant. In 1981, ALRECO Metals purchased the property from MSA and used the facility to process aluminum scrap metal of various alloys to produce three primary finished goods: 1) remelted scrap ingots (RSI or "sows"), 2) 30 lb. ingots and 3) molten aluminum for over-the-road transport. Incoming scrap was off-loaded into the Main Production Building or was staged in the yard for temporary storage. Staged scrap was sorted based on aluminum content prior to preprocessing.

Preprocessing of oily and/or damp aluminum materials was performed using a chip crusher and a dryer. Materials containing significant quantities of iron ("Cast", auto and other large scrap) were processed through a screening/shredder operation prior to introduction into the furnaces for melting.

Prior to 1981, dross (skimmings or slag) from the melting process was deposited or landfilled along the bluff on the eastern portion of the site. Pursuant to a Consent Judgment dated May 5, 1981 and a Consent Order between MSA and the Michigan Department of Natural Resources (MDNR) dated November, 16, 1982, MSA removed the dross residues and intermixed materials from the property. Subsequent to 1982, these materials were disposed at an "off-site" solid waste disposal facility.

Airborne particulates generated by the melting process were transported in ducts to the exterior of the building and captured in a multi-module dust collector system in super bags (baghouses) and disposed at an off-site solid waste disposal facility. Sometime prior to 1982, the baghouse dust may also have been landfilled on the subject property with the dross. Two baghouse complexes were utilized on-site, one located on the eastern portion of the property near the bluff and the other (larger one) on the southern portion of the property.

Three USTs were removed from the Tank Farm Area (located in the northern portion of the site) in 1988. The USTs included one 2,000-gallon UST for waste oil storage, one 12,000-gallon UST for regular gasoline storage and one 20,000-gallon UST for diesel fuel storage. No confirmatory soil samples were collected when the USTs were removed. Subsequent to the UST removal, six aboveground storage tanks (ASTs) were installed within a concrete secondary containment basin in the Tank Farm Area. The ASTs are currently present at the site and have contained various petroleum products including gasoline, diesel fuel and waste oil.

Two additional USTs for heating fuel storage were located adjacent to the northwest corner of the Main Production Building. One 10,000-gallon UST was removed in approximately 1981 and an additional 10,000-gallon UST was removed in 1988. No confirmatory soil samples were collected at the time the USTs were removed.

In November, 1996 AARES, Inc. initiated investigative activities in preparation of a Baseline Environmental Assessment (BEA) for the subject property. Areas investigated included the Tank Farm Area, the Office Area, the Bluff Area, the Baghouse Areas, the Outfall Areas, the Bulk Fuel Oil Tank/Pump House Areas, PCB-Containing Electrical Equipment, and Interior Floors.

Tank Farm Area. A total of 24 geoprobe soil borings were performed to depths ranging from 5 to 15 feet below grade. Soil samples were collected continuously to the terminal depth of each boring and screened using a Photo Ionization Detector (PID). Selected soil samples were transported to an off-site

laboratory for analysis. Soil samples were analyzed for BTEX, PNAs and total lead. A naturally occurring clay layer was encountered at depths ranging from 6 to 15 below grade. Soil samples from geoprobe borings GB-6, GB-8, GB-9 and GB-10 all contained various PNA compounds at concentrations exceeding Generic Residential Cleanup Criteria (GRCC). The soil sample from GB-9 also detected total lead at concentrations exceeding Direct Contact Criteria (DCC). The soil sample collected from GB-15 revealed concentrations of PNA compounds exceeding the GRCC and total lead which exceeded the Default Background Concentration.

The investigation revealed perched groundwater of limited lateral extent exists beneath the Tank Farm Area. It was encountered in geoprobe borings GB-10 through GB-14. Borings which yielded enough water were sampled and analyzed by an off-site laboratory. Analytical results indicated that the perched groundwater encountered in GB-10 and GB-11 is contaminated with PNA and BTEX compounds in concentrations exceeding GRCC. Geoprobe borings GB-12 and GB-13 revealed the perched groundwater encountered in these borings is contaminated with BTEX compounds in concentrations exceeding GRCC.

Of eight monitoring wells located on-site, only six (MW-3 through MW-8) were able to produce enough groundwater for sampling purposes. Groundwater samples were collected from these wells and analyzed for BTEX, PNA, VOC (except for MW-6 through MW-8), PCBs (except for MW-6 through MW-8), and dissolved metals. Analytical data indicated that the perched groundwater did not adversely impact the aquifer in the Tank Farm Area. All samples were non detect for BTEX and PNA compounds.

Office Area. Two 10,000-gallon USTs were located in this area for heating the office. One UST was removed in 1981 and the other was removed in 1988. Only two hand auger borings were performed to a depth of 9 feet. A strong petroleum odor was encountered from a depth of 4 feet down to 7 feet. Field screening of soils collected from the soil borings indicate the soils have been impacted with VOCs in this area of the property. A stiff gray clay was encountered in both borings from 7 to 9 feet below grade.

Perched groundwater was encountered in the vicinity of the Office Area. A groundwater sample was collected from the borings where possible. Only one groundwater sample was collected -- from boring HAB-1 -- and was submitted for analysis to an off-site laboratory. Analytical data indicated that detectable concentrations of BTEX exist in the perched water but below GRCC. PNAs were not detected.

Bluff Area A total of eight surficial soil borings were performed to a depth of 2 feet below grade along the bluff in an attempt to assess the potential for metal contamination in the shallow soils due to dross disposal. All samples were analyzed for total Michigan metals and PCBs. Bluff samples 1,2,3,5, 6 and 7 were also analyzed for aluminum, nickel, manganese and cyanide. Analytical results indicated concentrations of total metals which exceed Default Background Concentrations (DBC) in Bluff samples 1,2, 3, 5, 6, and 7. Specific metals which were detected above the DBC include aluminum, arsenic, cadmium, chromium, copper, lead, manganese, nickel and zinc. SPLP results were either non-detect or below the GRCC for groundwater.

Baghouse Areas. A total of three surficial (0 - 2 feet) soil samples were collected in the vicinity of the East baghouse (EB-1 through EB-3) and two surficial soil samples were collected in the vicinity of the South baghouse (SB-1 and SB-2). All samples were analyzed at an off-site laboratory for Michigan Metals and PCBs as well as aluminum, nickel, manganese and cyanide. Analyses revealed concentrations of total metals which exceeded DBC in all samples. No PCB compounds were detected in any of the samples. Metals which exceeded the DBC include aluminum, cadmium, copper, lead, manganese, nickel and zinc.

SPLP analyses were performed for all of the samples. Only two of the shallow soil samples exhibited SPLP values which exceeded the GRCC for groundwater. Concentrations of lead exceeded the GRCC for groundwater in EB-2 and SB-1. SPLP analysis of EB-2 also detected nickel above the GRCC for groundwater.

Outfall Areas. A total of 7 shallow soil samples (001 through 006 and 008) were collected in the vicinity of the drainage system outfalls. All samples were analyzed for total Michigan Metals and PCBs as well as aluminum, nickel, manganese and cyanide. Analytical data indicated concentrations of total metals

which exceeded DBC in all samples except 004. Concentrations of cyanide were within the GRCC for all samples, except for 004, and no PCB compounds were detected in any of the samples. Metals which exceeded the DBC include aluminum, arsenic, barium, cadmium, chromium, copper, lead, nickel and zinc. Concentrations of lead exceeded DCC in samples 001 and 006. SPLP analyses of the samples indicated all parameters were either non-detect or below GRCC for groundwater, with the exception of cyanide in 004.

Groundwater Contamination. Of the 8 monitoring wells existing on the site only 6 (MW-3 through MW-8) were able to be sampled. The samples were analyzed for the dissolved Michigan Metals plus dissolved aluminum, manganese and nickel. Monitoring wells MW-6 and MW-8 detected levels of dissolved manganese which exceeded the GRCC for groundwater. Since these monitoring wells are located downgradient of the main production building and east baghouse, it appears that prior aluminum recycling operations may have released manganese to the soils and it has migrated to the groundwater.

Bulk Fuel Oil Tank and Fuel Pump House. A 250,000-gallon bulk fuel oil AST is located approximately 290 feet west of the Main Production Building. The piping runs underground to a fuel pump house located adjacent to the southwest corner of the plant. A total of 13 soil samples were collected in this area: 8 around the perimeter of the bulk storage tank, 4 along the piping run and 1 located adjacent to the pump house. The borings were drilled to approximately 6 feet below grade at each location. Soil samples were field screened for VOCs using a PID. Field screening did not detect VOCs in the soils along the piping run or around the perimeter of the bulk storage tank. Field screening did, however, detect the presence of petroleum hydrocarbons in sample Fuel Pump House #1. Soil samples chosen for laboratory analysis to confirm the field screening were collected adjacent to the west exterior wall of the fuel pump house (Fuel Pump House #1) and adjacent to the bulk fuel oil storage tank (Fuel Oil Tank #1). Analytical results from these two samples indicate no detection for BTEX or PNAs.

Interior Floor Dust Residue. The visible floor dust residue observed in the Main Production Building was sampled in 3 locations: one sample was collected from the main furnace area (Furnace Sample A), one sample was collected from the shredder/dryer area (Shredder Sample A) and one sample was collected from the cooling area (Floor Dust Sample A). All residue samples were analyzed in an off-site laboratory for PCBs and for the 10 Michigan Metals. The laboratory analysis indicated concentrations of arsenic and lead in Shredder Sample A and Floor Dust Sample A exceeding DCC. PCB compounds were detected in Floor Dust Sample A, however, the total concentration of isomers detected was below the DCC.

TCLP analysis was conducted on Shredder Sample A for waste characterization. The results indicated concentrations of cadmium which exceeded the Toxic Characteristic as established in 40 CFR 261.24. The floor dust residue was removed and disposed off-site at the appropriate solid waste disposal facility.

The metal contaminants associated with the floor dust residue may have been introduced into interior floor drains, migrating through the drainage system and eventually discharging at the outfall locations.

Discussion. The use of a PID, although useful is not the best tool to use to fully "quantify and qualify" (i.e. determine the extent of) existing contamination at a site for a Category C BEA. The PID does not indicate concentrations less than 1 ppm. The existing contamination in the Tank Farm Area was identified but probably not fully delineated. Since the Tank Farm Area was the location of a former baghouse, characterization should have included metals. The contamination in the Office Area was identified but not fully delineated. The contamination in the Bluff Area was identified but not fully delineated -- likewise, for contamination identified in the Baghouse Areas, the Outfall Areas and the Bulk Fuel Oil Tank and Pump House Area. None of the soil samples along the piping run between the bulk storage tank and the pump house were submitted for confirmatory laboratory analysis. The amount of sampling along the piping run was also inadequate. Regardless of what SPLP analyses indicate, a groundwater sample indicating metals contamination cannot be explained away as is suggested in section 4.3.4.

A statement such as "...the potential also exists for a prior release of compounds which has not yet been identified by site investigations" as found in Section 5.0 should not be included in Category C BEAs. In the section describing Likelihood of Future Contamination, it is stated that petroleum compounds will not be used at areas where these compounds have been identified. They further state where petroleum products will be used and stored in the future but did not investigate those areas for the presence of

petroleum compounds. Changing housekeeping practices does not constitute an engineering control and does not ensure the prevention of future releases.

The discussion of how a new release would be determined from previous releases is not convincing, primarily because existing releases have not been fully delineated. The rationale presented would likely be sufficient to identify a catastrophic release from pre-existing releases.

Hazardous compounds that will be used on-site were not disclosed and no MSDSs for such compounds were included in the BEA.

The petition for BEA and Section 7a Compliance Analysis: The petition is signed May 23, 1997 while the BEA completion date is May 27, 1997.

Affidavit for Determination and Compliance Analysis: Petitioner signed the affidavit on May 23, 1997 stating that the BEA was completed on May 27, 1997.

Compliance Analysis: Cannot be affirmed because the extent of contamination has not been fully determined ("quantified and qualified").

### **Conclusion of District Peer Review Process, Reason For Denial, and/or Follow Up Action Recommended:**

Recommend denying the petition for all of the above reasons.

Jeffrey D. Smith 6/10/97  
PROJECT MANAGER DATE

**Approved By:**

**Denied By:**

District Senior Geologist: [Signature]

DATE: 6/10/97

District Senior EQA/EQM: [Signature]

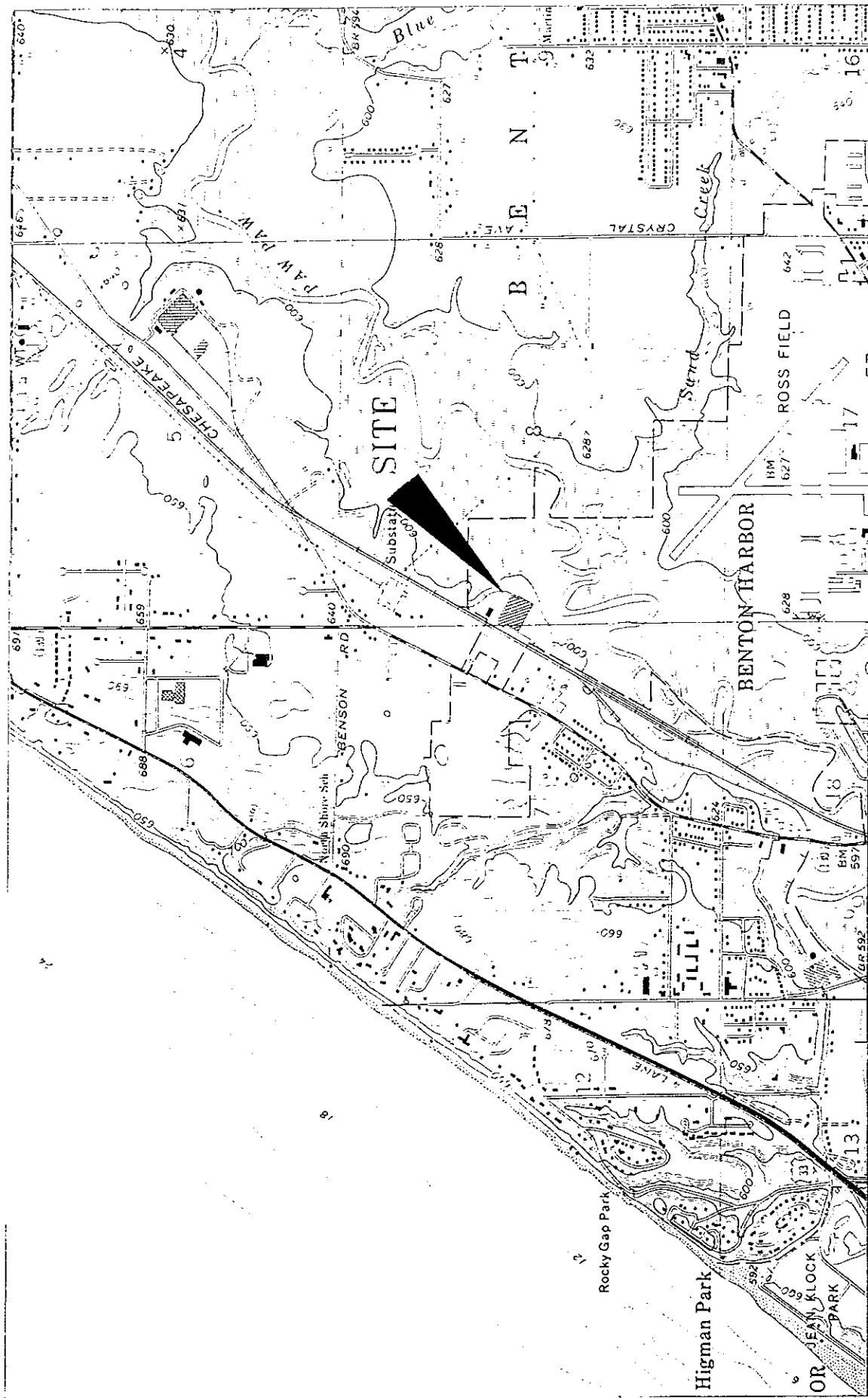
DATE: 6/10/97

District Supervisor: [Signature]

DATE: 6/10/97

Other than the above approved action, MDEQ is unable to express an opinion with regard to any other contaminants or interim response actions that may be associated with this site. Please refer to the site file for more information.

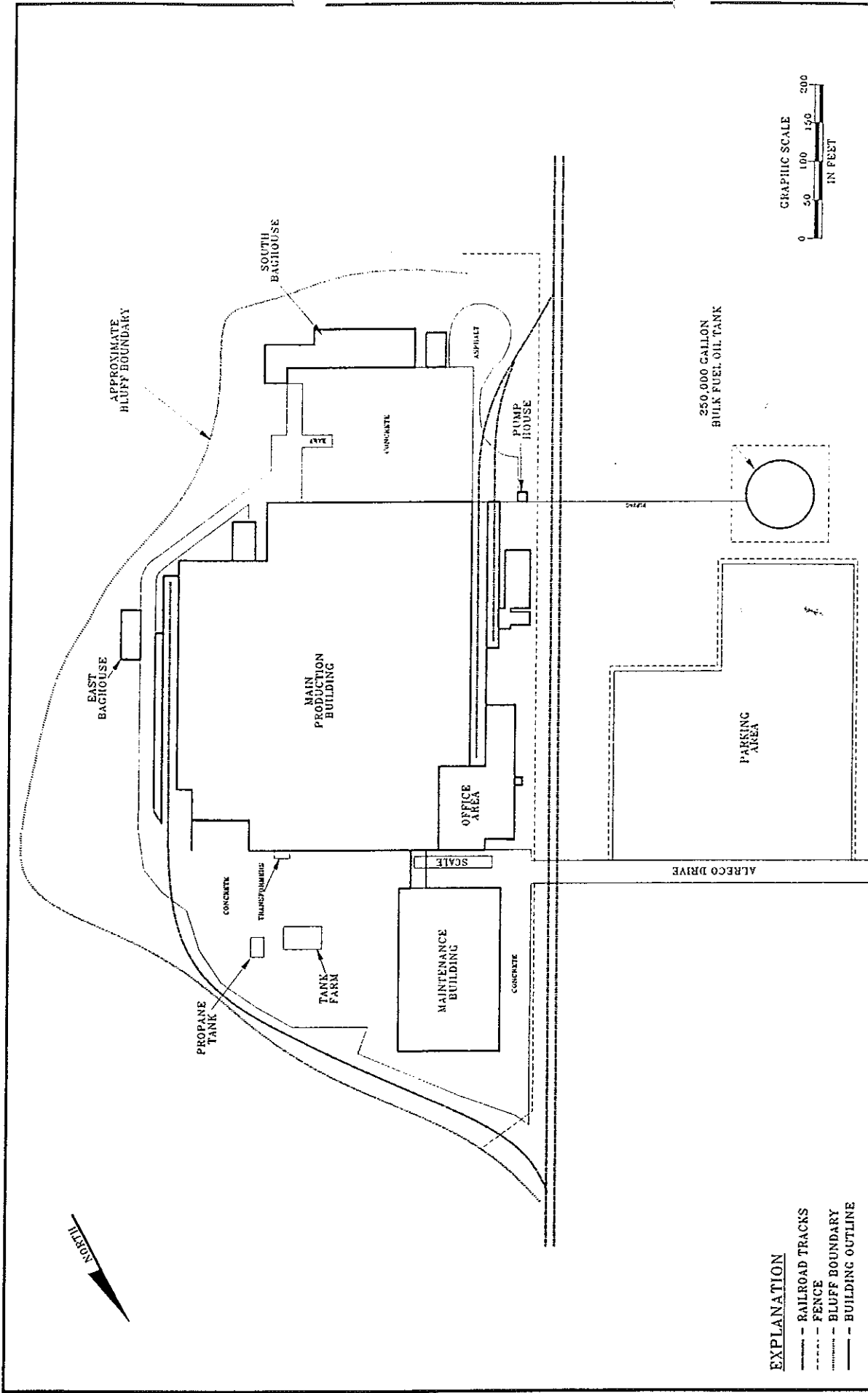
Rev. 04/22/97



AARES, Ltd. Environmental Consultants  
 5081 Wynn Road  
 Kalamazoo, Michigan 49001  
 Phone: (616) 343-7000 Fax: (616) 343-0502

FORMER ALRECO METALS FACILITY  
 900 Alreco Drive  
 Benton Harbor, Michigan

# SITE VICINITY MAP

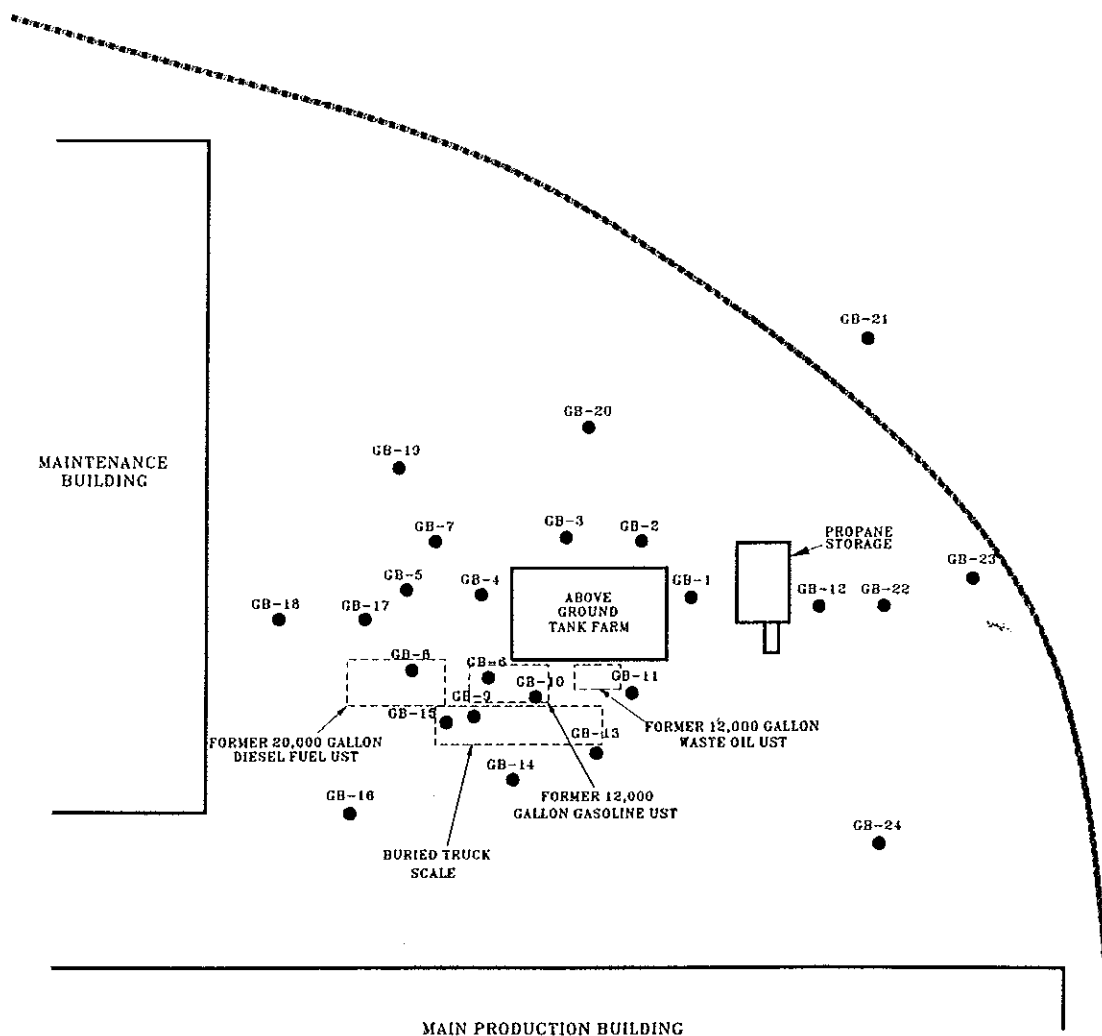


- EXPLANATION**
- RAILROAD TRACKS
  - - - FENCE
  - - - BLUFF BOUNDARY
  - BUILDING OUTLINE

**AARES, Ltd.** Environmental Consultants  
 5081 Wynn Road  
 Kalamazoo, Michigan 49001  
 Phone: (616) 343-7000 Fax: (616) 343-0502

**FORMER ALRECO METALS FACILITY**  
 900 Alreco Drive  
 Benton Harbor, Michigan

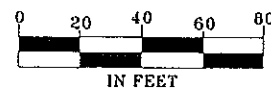
# SITE PLAN



## EXPLANATION

- - GEOPROBE BORING LOCATION
- - RAILROAD TRACKS

GRAPHIC SCALE



**AARES, Ltd.**  
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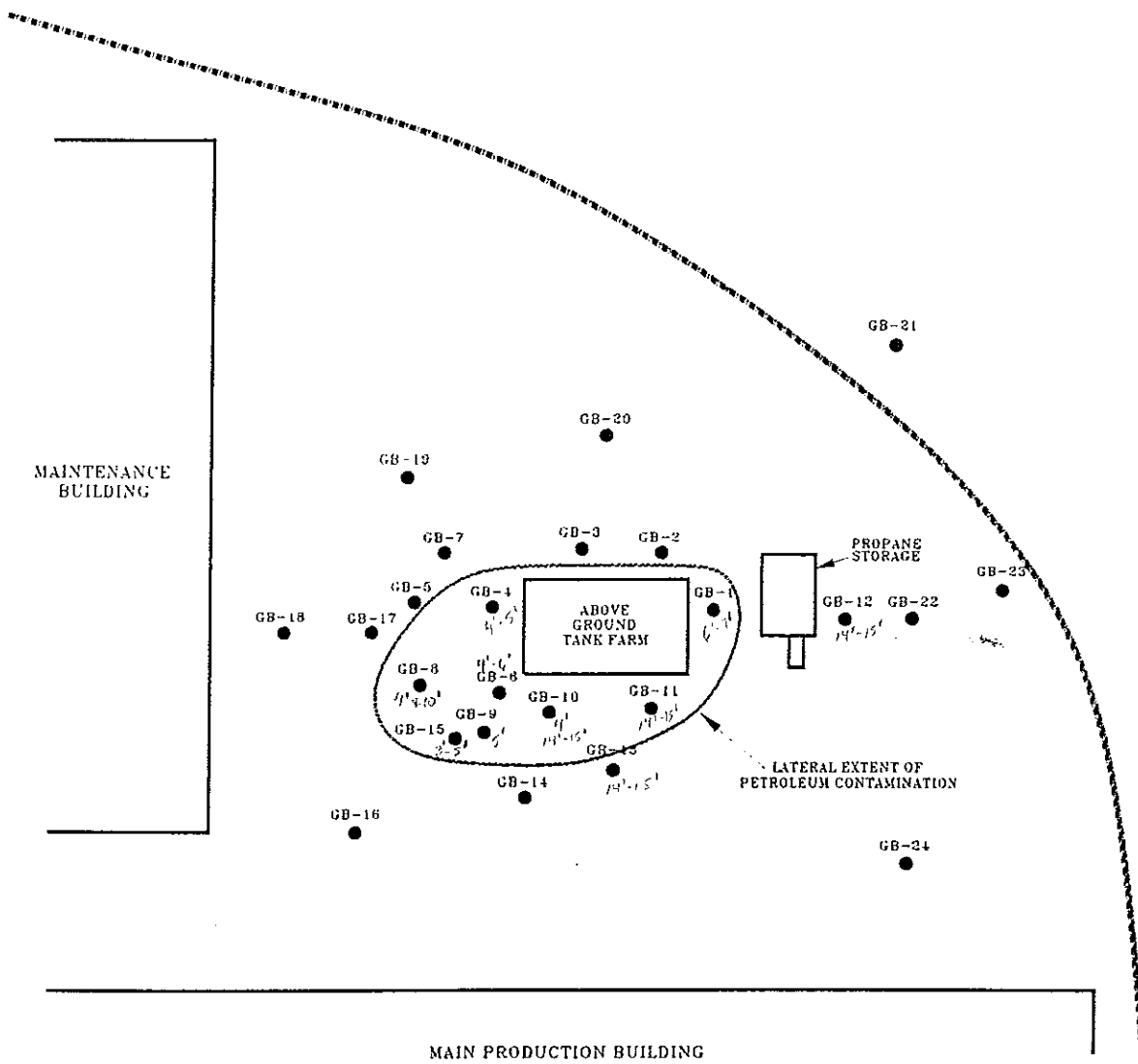
5081 Wynn Road  
Kalamazoo, Michigan 49001

**FORMER ALRECO  
METALS FACILITY**

900 ALRECO DRIVE  
BENTON HARBOR, MICHIGAN

**SITE MAP**

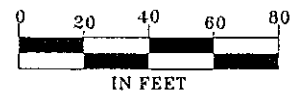
SHOWING GEOPROBE  
BORING LOCATIONS



## EXPLANATION

- - GEOPROBE BORING LOCATION
- - RAILROAD TRACKS

## GRAPHIC SCALE



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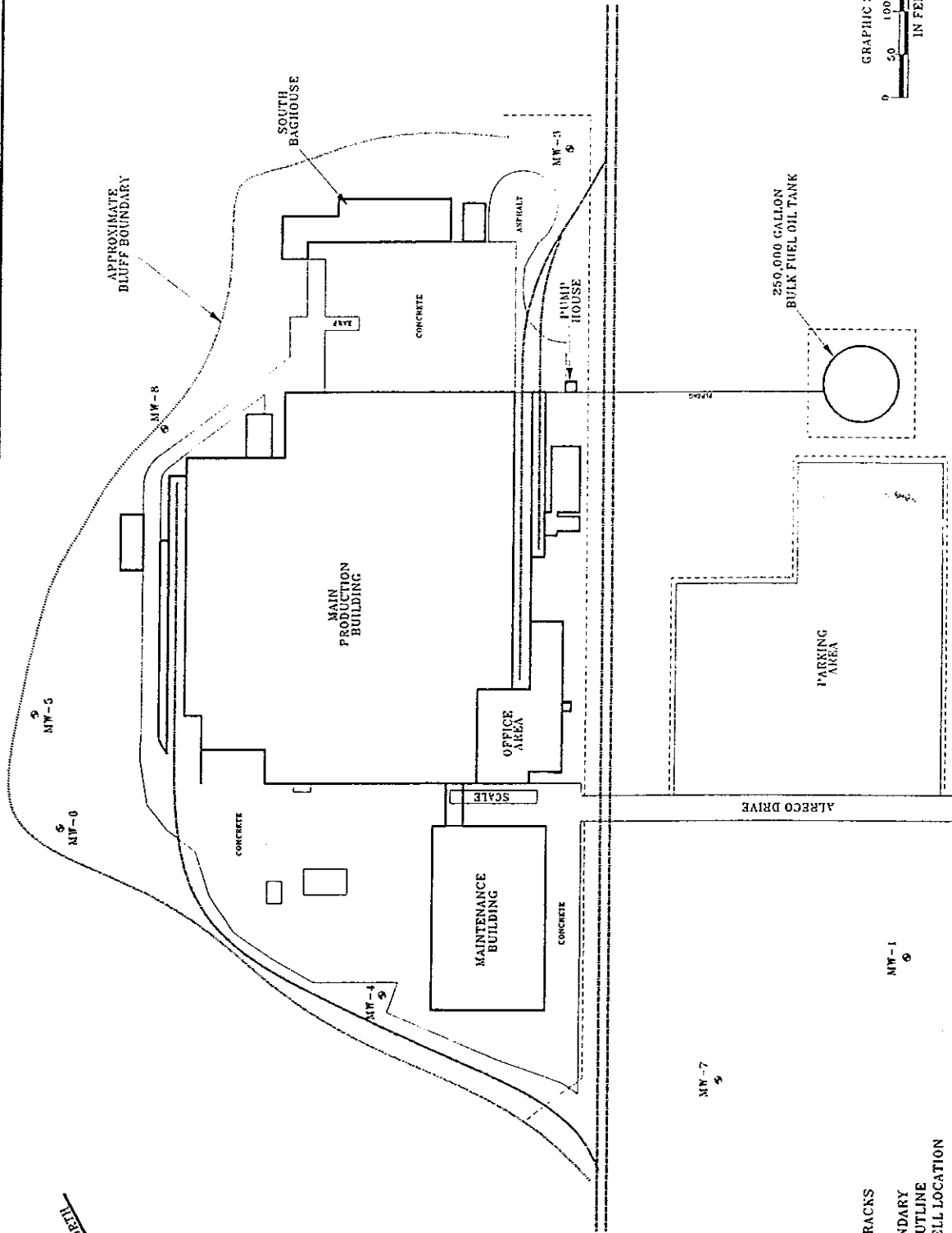
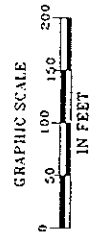
FORMER ALRECO  
METALS FACILITY  
900 ALRECO DRIVE  
BENTON HARBOR, MICHIGAN

SITE MAP  
SHOWING LATERAL EXTENT OF  
PETROLEUM CONTAMINATION



#### EXPLANATION

- RAILROAD TRACKS
- FENCE
- BLUFF BOUNDARY
- BUILDING OUTLINE
- ⊙ - MONITOR WELL LOCATION



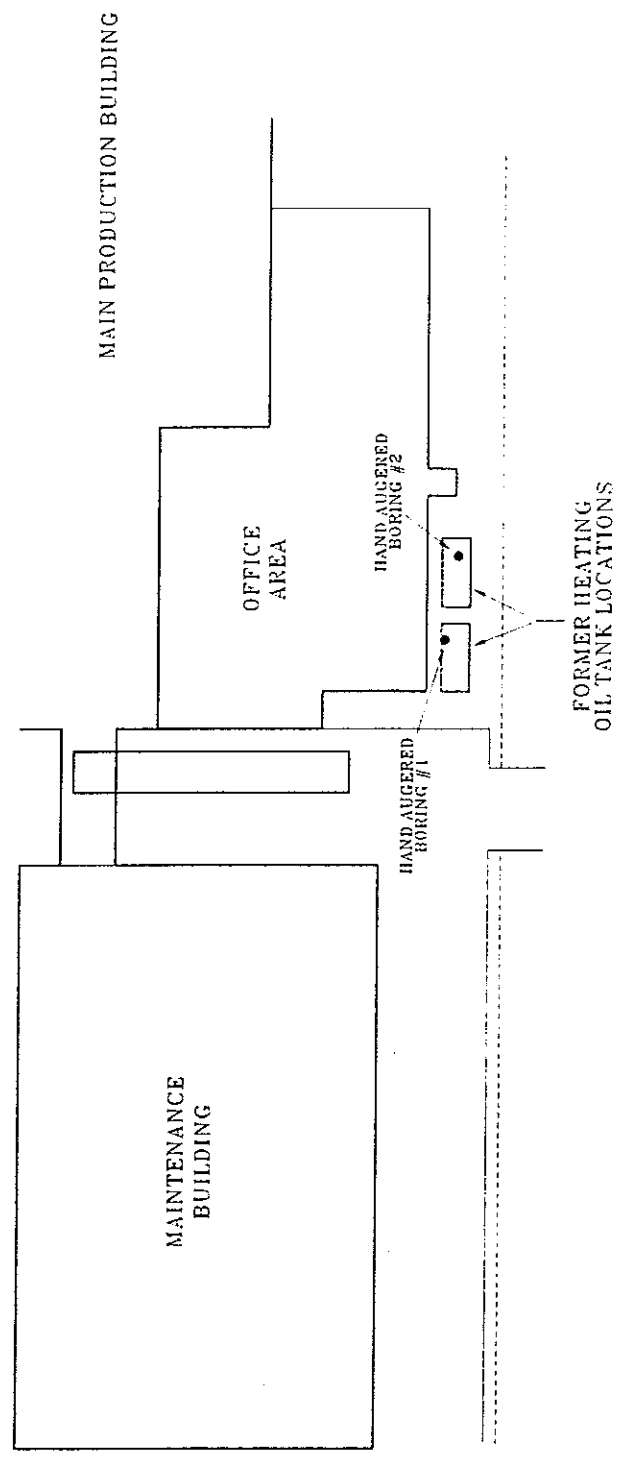
AARES, Ltd. Environmental Consultants  
5081 Wynn Road  
Kalamazoo, Michigan 49001  
Phone: (616) 313-7000 Fax: (616) 343-0502

### FORMER ALRECO METALS FACILITY

900 Alreco Drive  
Benton Harbor, Michigan

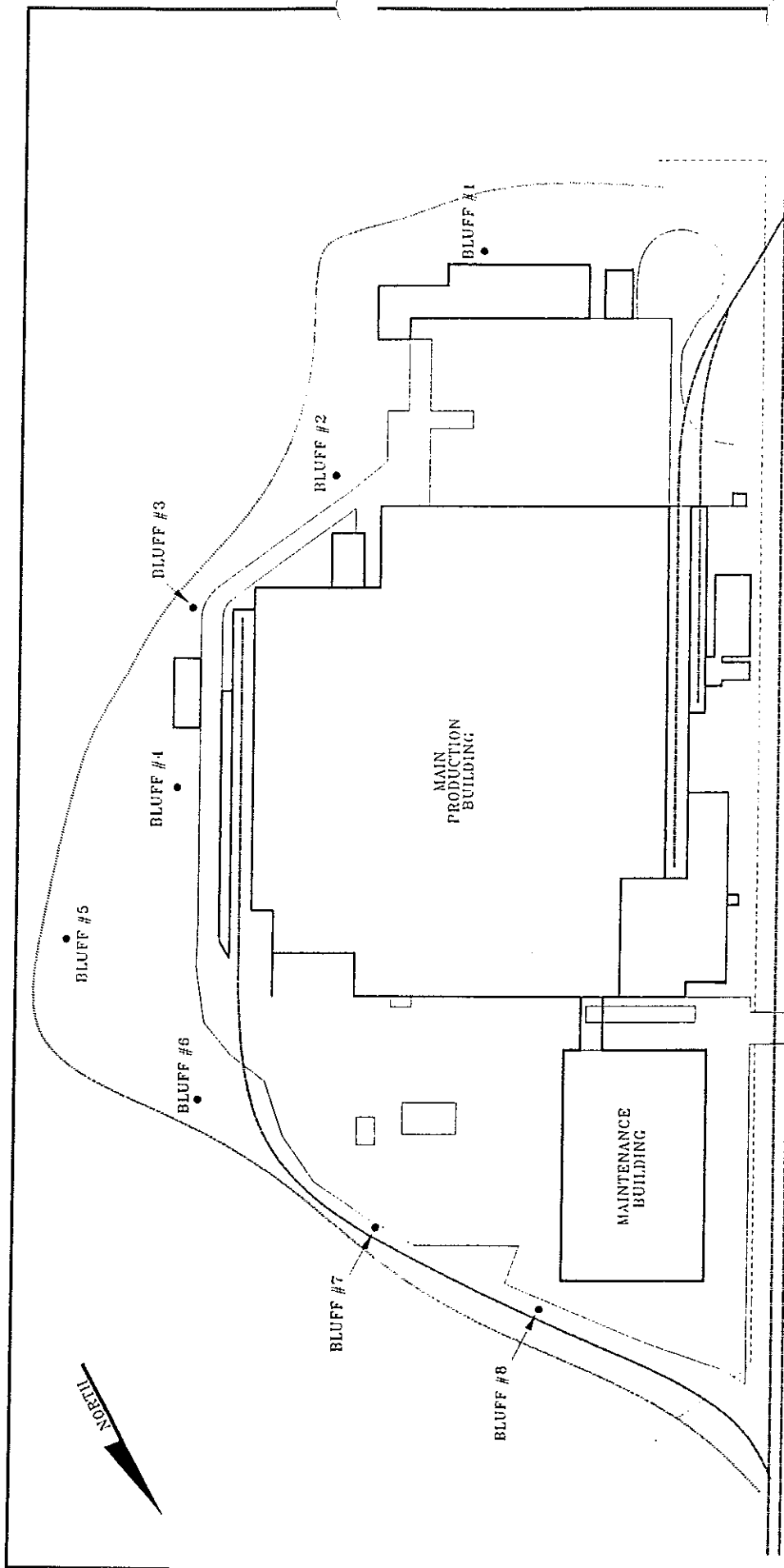
### SITE PLAN

SHOWING MONITOR WELL LOCATIONS



**EXPLANATION**  
----- FENCE  
• - HAND AUGER BORING LOCATION

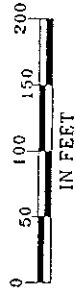
<b>AARES, Ltd.</b> Environmental Consultants 5081 Wynn Road Kalamazoo, Michigan 49001 Phone: (616) 343-7000 Fax: (616) 343-0502	<b>FORMER ALRECO METALS FACILITY</b> 900 Alreco Drive Benton Harbor, Michigan	<b>SITE PLAN</b> SOIL SAMPLE LOCATIONS IN THE OFFICE AREA
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#### EXPLANATION

- - BLUFF BORING LOCATION
- - - RAILROAD TRACKS
- - - FENCE
- - - BLUFF BOUNDARY

GRAPHIC SCALE

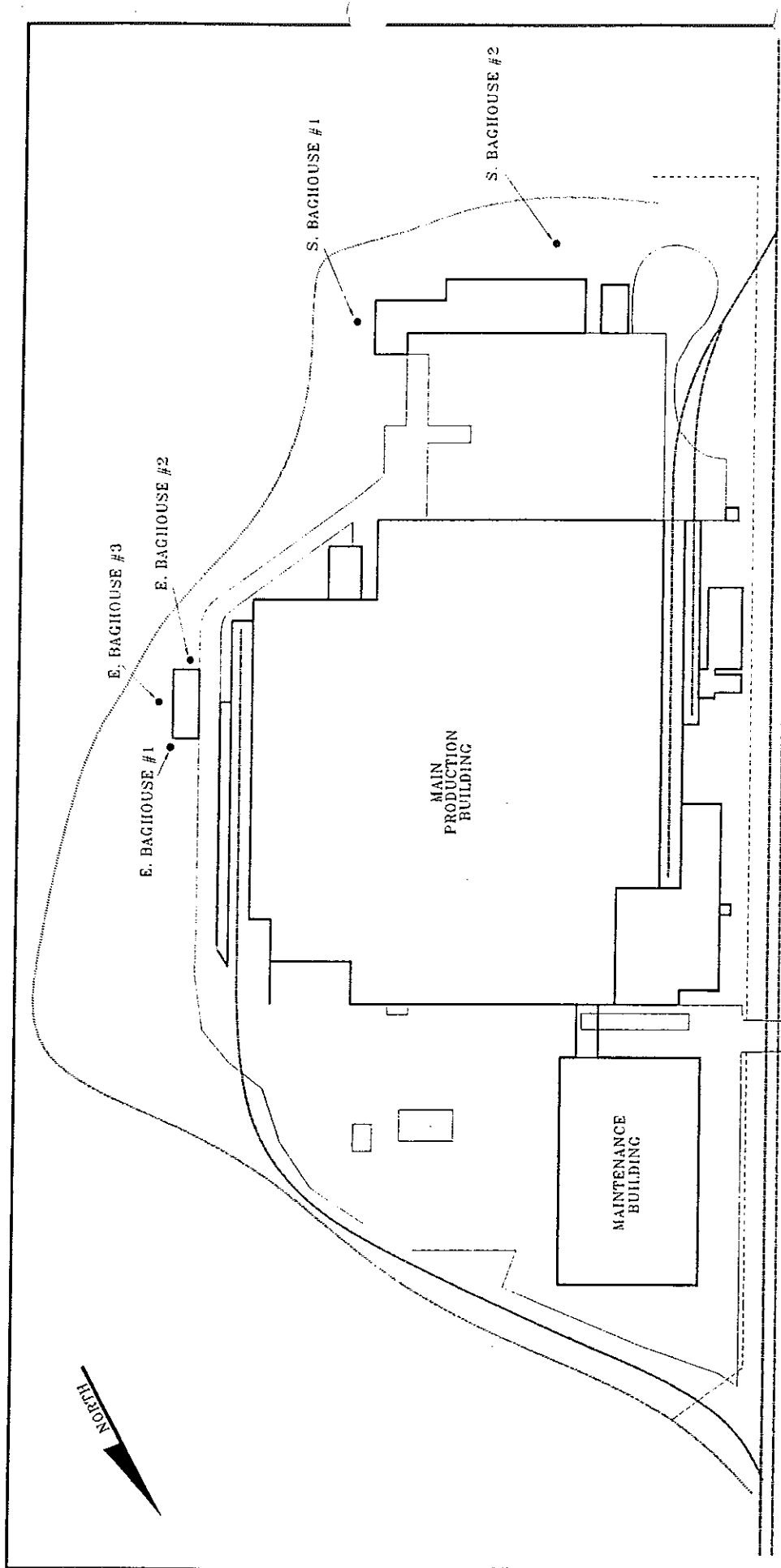


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Kalamazoo, Michigan 49001  
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FORMER ALRECO METALS FACILITY  
900 Alreco Drive  
Benton Harbor, Michigan

## SITE PLAN

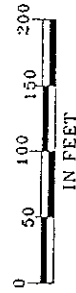
### BLUFF BORING LOCATIONS



# **EXPLANATION**

- - BAGHOUSE SAMPLE LOCATION
- - RAILROAD TRACKS
- - FENCE
- - BLUFF BOUNDARY

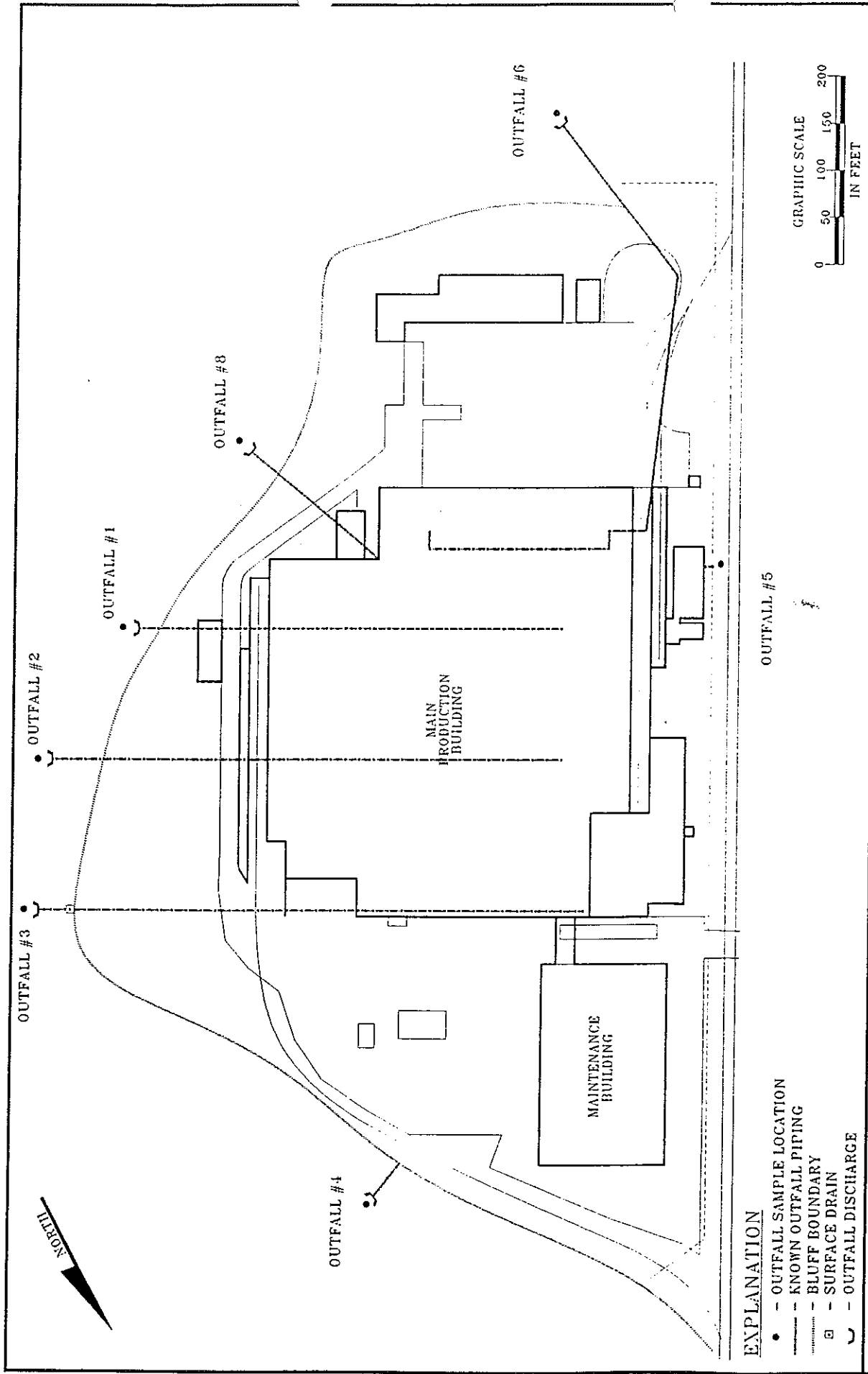
GRAPHIC SCALE



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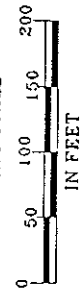
## **SITE PLAN** BAGHOUSE SOIL SAMPLE LOCATIONS



**EXPLANATION**

- - OUTFALL SAMPLE LOCATION
- - - KNOWN OUTFALL PIPING
- BLUFF BOUNDARY
- - SURFACE DRAIN
- U - OUTFALL DISCHARGE

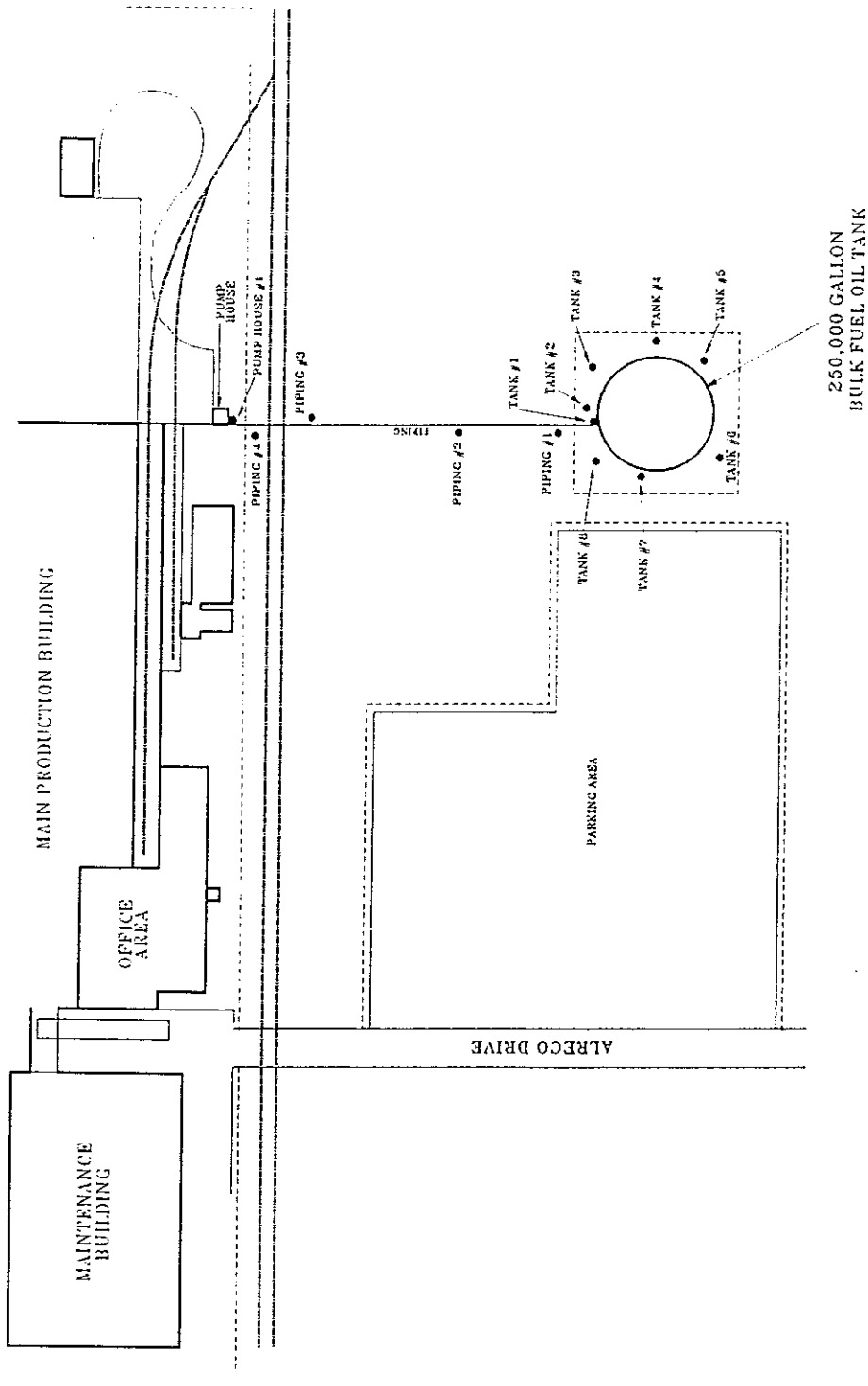
GRAPHIC SCALE



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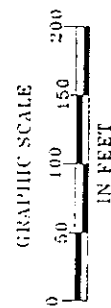
**FORMER ALRECO METALS FACILITY**  
 900 Alreco Drive  
 Benton Harbor, Michigan

**SITE PLAN**  
**OUTFALL SOIL SAMPLE**  
**LOCATIONS**



#### EXPLANATION

- - - RAILROAD TRACKS
- - - FENCE
- - - BLUFF BOUNDARY
- - - BUILDING OUTLINE
- SOIL SAMPLE LOCATION



AARES, Ltd. Environmental Consultants  
5081 Wynn Road  
Kalamazoo, Michigan 49001  
Phone: (616) 343-7000 Fax: (616) 343-0502

FORMER ALRECO METALS FACILITY  
900 Alreco Drive  
Benton Harbor, Michigan

SITE PLAN  
SOIL SAMPLE LOCATIONS NEAR THE  
BULK FUEL OIL TANK SYSTEM

TABLE #1

## TANK FARM - SOIL BORING ANALYTICAL RESULTS

SITE: FORMER ALRECO METALS FACILITY  
ANALYTICAL LABORATORY: EAGLE LABORATORIES

CHEMICAL PARAMETERS	GB-1 6-7	GB-4 4-5	GB-6 4-6	GB-8 4	GB-9 7-8	GB-8 10	GB-9 5	GB-10 4	GB-13 9-11	GB-14 9-11	ALLOWABLE LEVEL (ppb)*
BENZENE	ND	ND	59	ND	ND	ND	ND	ND	ND	ND	100
TOLUENE	ND	ND	480	240	20	23	59	ND	ND	ND	16,000
ETHYLBENZENE	86	ND	570	1,200	41	120	180	440	ND	ND	1,500
TOTAL XYLENES	290	31	1,600	4,000	140	490	570	1,900	ND	ND	5,600
TOTAL LEAD	14,000	11,000	5,500	4,300	8,900	5,700	800,000	1,300	3,400	4,200	21,000
ACENAPHTHENE	ND	ND	1,600	ND	ND	380	ND	ND	ND	ND	26,000
ACENAPHTHYLENE	ND	ND	ND	1,700	ND	ND	ND	2,200	ND	ND	520
ANTHRACENE	ND	ND	910	20,000	ND	ND	ND	ND	ND	ND	150,000
FLUORANTHENE	ND	ND	ND	20,000	ND	ND	ND	ND	ND	ND	18,000
FLUORENE	ND	ND	ND	20,000	ND	1,400	ND	ND	ND	ND	18,000
NAPHTHALENE	1,100	470	4,100	29,000	ND	1,900	2,200	6,200	ND	ND	5,200
PHENANTHRENE	480	420	5,600	43,000	ND	2,000	3,800	10,000	ND	ND	520
PYRENE	ND	ND	1,100	9,900	ND	690	570	1,900	ND	ND	11,000
2-METHYLNAPHTHALENE	2,100	1,100	13,000	15,000	ND	5,600	4,300	5,200	ND	ND	5,200
ALL OTHER PNAs	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA

NA - NOT APPLICABLE

ND - NOT DETECTABLE

ALL NUMBERS ARE EXPRESSED IN PARTS PER BILLION

METHOD DETECTION LIMITS WERE AS FOLLOWS: BTEX - 10ppb; PNA - 330ppb; TOTAL LEAD - 1,000 ppb.

\* - BASED ON MERA OPERATIONAL MEMORANDUM #8, REVISION 4 AND #15

TABLE #1, CONTINUED  
TANK FARM - SOIL BORING ANALYTICAL RESULTS

SITE: FORMER ALRECO METALS FACILITY  
ANALYTICAL LABORATORY: EAGLE LABORATORIES

CHEMICAL PARAMETERS	GB-15 3-5	GB-16 9-11	GB-17 9-11*	GB-18 9-11*	GB-23 9-11*	GB-19 9-11*	GB-20 9-11*	GB-21 9-11*	GB-22 9-11*	GB-23 9-11*	ALLOWABLE LEVEL (ppb)*
BENZENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	100
TOLUENE	17	ND	ND	ND	ND	ND	ND	ND	ND	ND	16,000
ETHYLBENZENE	220	ND	ND	ND	ND	ND	ND	ND	ND	ND	1,500
TOTAL XYLENES	640	ND	ND	ND	ND	ND	ND	ND	ND	ND	5,600
TOTAL LEAD	55,000	3,400	7,200	10,000	1,800	7,200	1,900	ND	ND	1,800	21,000
ACENAPHTHENE	2,700	ND	ND	ND	ND	ND	ND	ND	ND	ND	26,000
ACENAPHTHYLENE	890	ND	ND	ND	ND	ND	ND	ND	ND	ND	520
ANTHRACENE	5,200	ND	ND	ND	ND	ND	ND	ND	ND	ND	150,000
FLUORANTHENE	2,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	18,000
FLUORENE	860	ND	ND	ND	ND	ND	ND	ND	ND	ND	18,000
NAPHTHALENE	12,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	5,200
PHENANTHRENE	18,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	520
PYRENE	4,300	ND	ND	ND	ND	ND	ND	ND	ND	ND	11,000
2-METHYLNAPHTHALENE	47,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	5,200
ALL OTHER PNAs	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA

NA - NOT APPLICABLE

ND - NOT DETECTABLE

ALL NUMBERS ARE EXPRESSED IN PARTS PER BILLION

METHOD DETECTION LIMITS WERE AS FOLLOWS: BTX - 10ppb; PNA - 330ppb; TOTAL LEAD - 1,000 ppb.

\* - BASED ON MERA OPERATIONAL MEMORANDUM #8, REVISION 4 AND #15

TABLE #2

## TANK FARM - PERCHED GROUNDWATER ANALYTICAL RESULTS

SITE: FORMER ALRECO METALS FACILITY

ANALYTICAL LABORATORY: EAGLE LABORATORIES

CHEMICAL PARAMETERS	SB-10 GW	SB-11 GW	SB-12 GW	SB-13 GW	SB-14 GW	ALLOWABLE LEVEL (ppb)*
BENZENE	79	660	2	32	ND	5
TOLUENE	45	1,000	2	6	ND	790
ETHYLBENZENE	140	2,000	29	74	ND	74
TOTAL XYLENES	530	8,100	450	ND	ND	280
ACENAPHTHYLENE	ND	220	ND	ND	ND	26
ANTHRACENE	ND	5	ND	ND	ND	7,300
FLUORANTHENE	90	74	ND	ND	ND	880
FLUORENE	ND	14	ND	ND	ND	880
NAPHTHALENE	370	520	100	ND	ND	260
PHENANTHRENE	220	36	ND	ND	ND	26
PYRENE	870	110	ND	ND	ND	550
ALL OTHER PNAs	ND	ND	ND	ND	ND	NA

NA - NOT APPLICABLE

ND - NOT DETECTABLE

ALL NUMBERS ARE EXPRESSED IN PARTS PER BILLION

METHOD DETECTION LIMITS WERE AS FOLLOWS: BTEX - 1ppb; PNA - 5ppb.

\* - BASED ON MERA OPERATIONAL MEMORANDUM #8, REVISION 4 AND #15

# TABLE #3

## MONITOR WELL ANALYTICAL RESULTS

SAMPLE DATE: SEPTEMBER 1996/MARCH 1997

SITE: FORMER ALRECO METALS FACILITY

ANALYTICAL LABORATORY: EAGLE LABORATORIES

CHEMICAL PARAMETERS	MW-3	MW-4	MW-5	MW-6	MW-7	MW-8	ALLOWABLE LEVEL (ppm)*
ALL BTEX COMPOUNDS	ND	ND	ND	ND	ND	ND	NA
ALL PNA COMPOUNDS	ND	ND	ND	ND	ND	ND	NA
DISSOLVED ALUMINUM	NA	NA	NA	NA	NA	NA	ID
DISSOLVED ARSENIC	ND	ND	ND	NA	ND	0.19	0.05
DISSOLVED BARIUM	ND	ND	ND	ND	ND	ND	2.0
DISSOLVED CADMIUM	0.0005	ND	ND	NA	0.002	ND	0.005
DISSOLVED CHROMIUM	ND	ND	ND	ND	ND	ND	0.1
DISSOLVED COPPER	ND	ND	ND	ND	ND	ND	1.4
DISSOLVED LEAD	ND	ND	ND	ND	ND	ND	0.004
DISSOLVED MANGANESE	NA	NA	NA	NA	NA	NA	0.18
DISSOLVED MERCURY	ND	ND	ND	ND	ND	ND	0.002
DISSOLVED NICKEL	NA	NA	NA	NA	NA	NA	0.10
DISSOLVED SELENIUM	ND	ND	ND	ND	ND	ND	0.05
DISSOLVED SILVER	ND	ND	ND	ND	ND	ND	0.034
DISSOLVED ZINC	ND	ND	ND	NA	ND	0.08	2.4
ALL PCBS	ND	ND	ND	NA	NA	NA	NA
ALL VOLATILE ORGANICS	ND	ND	ND	NA	NA	NA	NA

ID - INADEQUATE DATA TO DEVELOP CRITERION

NA - NOT APPLICABLE

ND - NOT DETECTABLE

ALL NUMBERS ARE EXPRESSED IN PARTS PER MILLION

\* - BASED ON MERA OPERATIONAL MEMORANDUM #8, REVISION 4 AND #15

TABLE #3A  
 MONITOR WELL ANALYTICAL RESULTS  
 SAMPLE DATE: MAY 2, 1997

SITE: FORMER ALRECO METALS FACILITY  
 ANALYTICAL LABORATORY: BRIGHTON ANALYTICAL, Inc.

CHEMICAL PARAMETERS	MW-3	MW-4	MW-5	MW-6	MW-7	MW-8	ALLOWABLE LEVEL (ppm) *
DISSOLVED ALUMINUM	ND	ND	ND	ND	0.04	ND	ID
DISSOLVED ARSENIC	0.002	ND	0.001	0.004	ND	0.002	0.05
DISSOLVED BARIUM	ND	ND	ND	ND	ND	0.96	2.0
DISSOLVED CADMIUM	0.0002	ND	ND	ND	ND	ND	0.005
DISSOLVED CHROMIUM	ND	ND	ND	ND	ND	0.006	0.1
DISSOLVED COPPER	ND	ND	ND	ND	ND	0.23	1.4
DISSOLVED LEAD	ND	ND	ND	ND	ND	ND	0.004
DISSOLVED MANGANESE	ND	ND	ND	2.3	ND	2.5	0.18
DISSOLVED MERCURY	ND	ND	ND	ND	ND	ND	0.002
DISSOLVED NICKEL	ND	ND	ND	ND	ND	ND	0.10
DISSOLVED SELENIUM	ND	ND	ND	ND	ND	0.009	0.05
DISSOLVED SILVER	ND	ND	ND	ND	ND	ND	0.034
DISSOLVED ZINC	0.05	ND	ND	0.06	0.02	0.02	2.4

ID - INADEQUATE DATA TO DEVELOP CRITERION

ND - NOT DETECTABLE

ALL NUMBERS ARE EXPRESSED IN PARTS PER MILLION

\* - BASED ON MERA OPERATIONAL MEMORANDUM #8, REVISION 4 AND #15

TABLE #3B  
 MONITOR WELL ANALYTICAL RESULTS  
 SAMPLE DATE: MAY 15, 1997

SITE: FORMER ALRECO METALS FACILITY  
 ANALYTICAL LABORATORY: BRIGHTON ANALYTICAL, Inc.

CHEMICAL PARAMETERS	MW-3	MW-4	MW-5	MW-6	MW-7	MW-8	ALLOWABLE LEVEL (ppm)*
DISSOLVED ALUMINUM	ND	ND	ND	ND	ND	ND	ID
DISSOLVED ARSENIC	ND	ND	ND	0.003	ND	ND	0.05
DISSOLVED BARIUM	ND	ND	ND	ND	ND	1.41	2.0
DISSOLVED CADMIUM	ND	ND	ND	ND	ND	ND	0.005
DISSOLVED CHROMIUM	ND	ND	ND	ND	ND	ND	0.1
DISSOLVED COPPER	ND	ND	ND	ND	ND	0.24	1.4
DISSOLVED LEAD	ND	ND	ND	ND	ND	ND	0.004
DISSOLVED MANGANESE	0.14	ND	ND	2.2	ND	4.26	0.18
DISSOLVED MERCURY	ND	ND	ND	ND	ND	ND	0.002
DISSOLVED NICKEL	ND	ND	ND	ND	ND	ND	0.10
DISSOLVED SELENIUM	ND	ND	ND	ND	ND	ND	0.05
DISSOLVED SILVER	ND	ND	ND	ND	ND	ND	0.034
DISSOLVED ZINC	ND	ND	ND	0.06	ND	ND	2.4

ID - INADEQUATE DATA TO DEVELOP CRITERION

ND - NOT DETECTABLE

ALL NUMBERS ARE EXPRESSED IN PARTS PER MILLION

\* - BASED ON MERA OPERATIONAL MEMORANDUM #8, REVISION 4 AND #15

# TABLE #5

## BLUFF SAMPLES ANALYTICAL RESULTS

SITE: FORMER ALRECO METALS FACILITY  
ANALYTICAL LABORATORY: EAGLE LABORATORIES

CHEMICAL PARAMETERS	BLUFF#1	BLUFF#2	BLUFF#3	BLUFF#4	BLUFF#5	BLUFF#6	BLUFF#7	BLUFF#8	ALLOWABLE LEVEL (ppm)*
TOTAL ALUMINUM	20000	4800	40000	NA	17000	13000	8200	NA	6,900
TOTAL ARSENIC	4.3	10	11	2.5	9.6	11	2.9	2.5	5.8
TOTAL BARIUM	44	27	47	24	42	29	66	17	75
TOTAL CADMIUM	0.16	0.15	1.5	0.06	10	1.1	3.3	ND	1.2
TOTAL CHROMIUM	8.8	6.4	28	3.5	36	27	140	3.4	18
TOTAL COPPER	120	13	690	10	570	730	580	3.4	32
TOTAL CYANIDE	ND	ND	ND	NA	ND	ND	ND	NA	.4
TOTAL LEAD	14	7.6	300	ND	130	67	240	ND	21
TOTAL MANGANESE	2700	370	220	NA	490	160	110	NA	440
TOTAL MERCURY	ND	ND	ND	ND	ND	ND	ND	ND	0.13
TOTAL NICKEL	6.5	13	40	NA	47	30	10	NA	20
TOTAL SELENIUM	ND	ND	ND	ND	ND	ND	ND	ND	0.41
TOTAL SILVER	ND	ND	ND	ND	ND	ND	1	ND	1
TOTAL ZINC	69	64	1200	27	3000	610	2800	21	47
ALL PCBs	ND	ND	ND	ND	ND	ND	ND	ND	23
SPLP ALUMINUM	0.24	NA	0.46	NA	0.24	1.2	0.29	NA	NONE
SPLP MANGANESE	ND	NA	NA	NA	ND	NA	NA	NA	0.18
SPLP NICKEL	NA	NA	0.07	NA	0.07	ND	NA	NA	0.05
SPLP ARSENIC	NA	0.008	0.008	NA	0.006	0.01	NA	NA	0.05
SPLP CADMIUM	NA	NA	0.0007	NA	0.0005	NA	0.0002	NA	0.005
SPLP CHROMIUM	NA	NA	ND	NA	ND	ND	ND	NA	0.1
SPLP COPPER	ND	NA	ND	NA	ND	ND	ND	NA	1.4
SPLP LEAD	NA	NA	ND	NA	ND	ND	ND	NA	0.004
SPLP ZINC	0.07	0.13	0.2	NA	1.1	0.38	0.14	NA	2.4

NA - NOT ANALYZED

ND - NOT DETECTABLE

ALL NUMBERS ARE EXPRESSED IN PARTS PER MILLION

\* - BASED ON MERA OPERATIONAL MEMORANDUM #8, REVISION 4 AND #15

TABLE #6

## EAST AND SOUTH BAGHOUSE SAMPLE ANALYTICAL RESULTS

SITE: FORMER ALRECO METALS FACILITY  
ANALYTICAL LABORATORY: EAGLE LABORATORIES

CHEMICAL PARAMETERS	EAST BAGHOUSE #1	EAST BAGHOUSE #2	EAST BAGHOUSE #3	SOUTH BAGHOUSE #1	SOUTH BAGHOUSE #2	ALLOWABLE LEVEL (ppm)*
TOTAL ALUMINUM	7000	17000	15000	10000	7800	6,900
TOTAL ARSENIC	4.6	4.9	5.1	4.9	4.8	5.8
TOTAL BARIUM	26	53	33	42	43	75
TOTAL CADMIUM	0.22	2.4	0.26	0.29	0.45	1.2
TOTAL CHROMIUM	8.8	17	13	10	10	18
TOTAL COPPER	11	360	150	98	39	32
TOTAL CYANIDE	ND	ND	ND	0.4	ND	.4
TOTAL LEAD	2.9	100	21	31	13	21
TOTAL MANGANESE	130	170	210	200	780	440
TOTAL MERCURY	ND	ND	ND	ND	ND	0.13
TOTAL NICKEL	7.7	36	21	14	12	20
TOTAL SELENIUM	ND	ND	ND	ND	ND	0.41
TOTAL SILVER	ND	ND	ND	ND	ND	1
TOTAL ZINC	41	1200	340	150	84	47
ALL PCBs	ND	ND	ND	ND	ND	23
SPLP ALUMINUM	14	2.9	11	2.6	12	0.02
SPLP ARSENIC	NA	ND	NA	NA	NA	0.05
SPLP BARIUM	NA	0.7	NA	NA	NA	2
SPLP CADMIUM	NA	ND	NA	NA	NA	0.005
SPLP CHROMIUM	NA	ND	NA	NA	NA	0.1
SPLP COPPER	NA	0.06	0.02	0.02	0.02	1.4
SPLP CYANIDE	NA	NA	NA	ND	NA	0.05
SPLP LEAD	NA	0.015	NA	0.007	NA	0.004
SPLP MANGANESE	NA	NA	NA	NA	.13	0.18
SPLP MERCURY	NA	ND	NA	NA	NA	0.002
SPLP NICKEL	NA	0.06	ND	NA	NA	0.05
SPLP SELENIUM	NA	ND	NA	NA	NA	0.05
SPLP SILVER	NA	ND	NA	NA	NA	0.034
SPLP ZINC	NA	0.26	0.73	0.31	0.52	2.4

NA - NOT ANALYZED

ND - NOT DETECTABLE

ALL NUMBERS ARE EXPRESSED IN PARTS PER MILLION

\* - BASED ON MERA OPERATIONAL MEMORANDUM #8, REVISION 4 AND #15

TABLE #7  
OUTFALL SAMPLES

SITE: FORMER ALRECO METALS FACILITY  
ANALYTICAL LABORATORY: EAGLE LABORATORIES

CHEMICAL PARAMETERS	OUTFALL #1	OUTFALL #2	OUTFALL #3	OUTFALL #4	OUTFALL #5	OUTFALL #6	OUTFALL #8	ALLOWABLE LEVEL (ppm)*
TOTAL ALUMINUM	26000	29000	20000	2600	17000	14000	290000	6,900
TOTAL ARSENIC	4.6	5.5	5	1.5	8.9	5.3	4.3	5.8
TOTAL BARIUM	55	49	56	25	98	65	58	75
TOTAL CADMIUM	11	2.3	2.8	ND	2.7	0.68	0.94	1.2
TOTAL CHROMIUM	160	37	51	4.7	22	20	29	18
TOTAL COPPER	930	770	850	24	250	360	480	32
TOTAL CYANIDE	ND	0.3	ND	1.1	0.4	ND	0.21	.4
TOTAL LEAD	480	120	180	5.4	68	440	71	21
TOTAL MANGANESE	430	150	140	77	90	150	220	440
TOTAL MERCURY	ND	ND	ND	ND	ND	ND	ND	0.13
TOTAL NICKEL	200	37	69	5.3	32	27	43	20
TOTAL SELENIUM	ND	ND	ND	ND	ND	ND	ND	0.41
TOTAL SILVER	ND	ND	ND	ND	ND	ND	ND	1
TOTAL ZINC	3000	1300	4800	39	700	400	630	47
ALL PCBs	ND	ND	ND	ND	ND	ND	ND	23
SPLP ALUMINUM	0.4	0.31	0.32	NA	2.4	1.8	0.43	NONE
SPLP ARSENIC	NA	NA	NA	NA	ND	NA	NA	0.05
SPLP BARIUM	NA	NA	NA	NA	0.9	NA	NA	2
SPLP CADMIUM	ND	ND	ND	NA	ND	NA	NA	0.005
SPLP CHROMIUM	ND	ND	ND	NA	ND	ND	ND	0.1
SPLP COPPER	ND	ND	ND	NA	ND	ND	ND	1.4
SPLP CYANIDE	NA	NA	NA	0.21	ND	NA	NA	0.05
SPLP LEAD	ND	ND	ND	NA	0.003	ND	ND	0.004
SPLP NICKEL	ND	ND	ND	NA	ND	ND	ND	0.1
SPLP ZINC	0.15	0.32	0.51	NA	0.35	0.28	0.25	2.4

NA - NOT ANALYZED

ND - NOT DETECTABLE

ALL NUMBERS ARE EXPRESSED IN PARTS PER MILLION

\* - BASED ON MERA OPERATIONAL MEMORANDUM #8, REVISION 4 AND #15

**BEA Record Report**

27-Jun-97

BEA ID: P97-00067-PL

<b>Sub name:</b> Tobian Metals, Inc. <b>Sub address1:</b> 350 Palladium Drive <b>Sub address2:</b> P. O. Box 586 <b>Sub city:</b> St. Joseph <b>Sub state:</b> MI <b>Sub zip:</b> 49085-		<b>Prop name:</b> Alreco Metals <b>Prop address1:</b> 900 Alreco Road <b>Prop address2:</b> <b>Prop city/twn:</b> Benton Harbor <b>Prop county:</b> Berrien # 11	
<b>Current owner:</b> No <b>Prospective owner:</b> Yes <b>Current operator:</b> No <b>Prospective operator:</b> Yes <b>Current lender:</b> No <b>Prospective lender:</b> No		<b>Con name:</b> Mrs. Connie L. Johnson <b>Con address1:</b> Tobian Metals, Inc. <b>Con address2:</b> P. O. Box 586 <b>Con city:</b> St. Joseph <b>Con state:</b> MI <b>Con zip:</b> 49085- <b>Con phone:</b> (616) 429-5443	
<b>Form type:</b> Petition - PR4445 <b>District:</b> PL <b>Received:</b> 5/27/97			
<b>Due care:</b> Yes <b>Returned_fee:</b> No <b>PRA:</b> No <b>Division:</b> ERD <b>Date assigned:</b> 5/27/97 <b>Due date:</b> 6/17/97			
<b>Staff:</b> Yes <b>Staff assignee:</b> DuCharme & Spruit <b>Contractor:</b> No <b>Contractor assignee:</b> <b>Contractor charges:</b> \$0		<b>Site ID:</b> <b>New site:</b> No <b>Other:</b> <b>Other type:</b> <b>Property use:</b> Aluminum recycling <b>BEA determination:</b> Not Adequate <b>BEA determination sent:</b> 6/18/97 <b>BEA process days:</b> 16 <b>20107A obligation:</b> <b>Oblig. determination sent:</b> 6/18/97 <b>20107A process days:</b> 16 <b>20107A(1) (a):</b> Not Satisfied <b>20107A(1) (b):</b> <b>20107A(1) (c):</b>	
<b>BEA initial response:</b> Yes <b>BEA initial response date:</b> 6/18/97 <b>BEA initial response days:</b> 15 <b>BEA second submittal:</b> 6/26/97 <b>BEA second response:</b> No <b>BEA second response date:</b> <b>BEA second response days:</b> 0 <b>BEA third submittal:</b>			
<b>20107A initial response:</b> No <b>20107A initial response date:</b> <b>20107A initial response days:</b> 0 <b>20107A second submittal:</b>		<b>20107A second response:</b> No <b>20107A second response date:</b> <b>20107A second response days:</b> 0 <b>20107A third submittal:</b>	
<b>Ineligible</b> <b>Response action:</b> No <b>Petition_not_fac:</b> No <b>Submittal_not_fac:</b> No <b>Not_after_6/5/95:</b> No <b>Not_within_45:</b> No <b>Not_in_six_months:</b> No		<b>Not Complete</b> <b>BEA_report_missing:</b> No <b>Proposed_use_missing:</b> No <b>Fee_incorrect:</b> No <b>Proposed_response_missing:</b> No <b>Pet_aff_missing:</b> No <b>Incorrect_form:</b> No <b>Env_prof_aff_missing:</b> No <b>Fee_with_submittal:</b> No	

Environmental Response Division

Documentation for Approved Partial Closure

Printed under the authority of Part 201, Environmental Remediation, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451).



Site Name: ALRECO

Site County: Berrien

Site Address: 900 Alreco Road  
Benton Harbor, Michigan

Site ID#: 110021

The plant property became contaminated by the improper disposal of aluminum dross, a waste product of reclaimed aluminum, after 1982. The material was dumped over the edge of the bluff around the property where it came in contact with wetlands associated with the Paw Paw River. Test results had shown that large amounts of chorides, sodium and potassium were impacting the wetland.

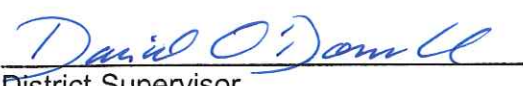
In 1983 large amounts of aluminum dross were excavated and properly disposed off-site by ALRECO after lengthy negotiations with the state and issuance of a court order. Soil bank erosion abatement measures also were taken to protect the adjacent wetlands and the Paw Paw River.

The Environmental Response division was prepared to conduct a follow-up investigation in FY 97 to determine the effectiveness of the previous removal activities. In the meantime the property changed hands and the new owner/operator performed a category C Baseline Environmental Assessment that was affirmed. Any future releases would be the responsibility of the petitioner.

Prepared by:

  
Project Manager

  
Date

  
District Supervisor

  
Date

Approved by:

Bernier

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

INTEROFFICE COMMUNICATION

January 16, 1998

TO: ALRECO File

FROM: Jeffrey D. Spruit  
Environmental Response Division  
Plainwell District  
616-692-2674

SUBJECT: Acknowledgment of Consent Judgment Compliance

On December 18, 1997 Mr. John Sommerdyke of Miller, Johnson, Snell, & Cumiskey, attorney for Tobian metals, requested that the attached affidavit be signed as drafted or appropriately revised and signed to reflect the concurrence of the Environmental Response Division (ERD) that the clean up ordered by the Consent Judgment dated May 5, 1981, and the Consent Order dated November 16, 1982, had been satisfactorily completed by ALRECO Metals, then known as Michigan Standard Alloys (MSA). The initial reply to Mr. Sommerdyke on December 23, 1997, after conferring with Linn Duling, the District Supervisor for ERD, was that we could not sign the document, but we could modify it to say that we have documentation in our files stating that the divisions involved have indicated the Judgment and Order have been carried out satisfactorily. Upon review of the revised affidavit by the ERD District Supervisor and after conferring with Compliance and Enforcement staff in Lansing, it was decided that ERD cannot sign such an affidavit. I advised Mr. Sommerdyke of this decision on January 15, 1997. I also suggested he contact Mary Douglas, the Air Quality Division District Supervisor, in an attempt to get them to sign off, that the Judgment and Order were satisfied by MSA.



JDS:mlp

Attachment

C/E File

10: Turn Loop

NATURAL RESOURCES COMMISSION  
 THOMAS J. ANDERSON  
 MARLENE J. FLUHRARY  
 KERRY KAMMER  
 G. STEWART MYERS  
 DAVID D. OLSON  
 RAYMOND POUPORE

STATE OF MICHIGAN



JAMES J. BLANCHARD, Governor

## DEPARTMENT OF NATURAL RESOURCES

STEVENS T. MASON BUILDING  
 BOX 30018  
 LANSING, MI 48202

GORDON E. GUTER, Director

AIR POLLUTION CONTROL COMMISSION  
 ICE E. JAGER, CHAIRMAN  
 JEANETTE R. ARASTYAN  
 RUSSEL E. COSSMAN  
 ALAN M. GREENBERG  
 RICHARD E. HONICKY, MD  
 NICHOLAS C. KACHMAN  
 CHRISTINE LITZAL  
 FRANK P. PARTER  
 DELBERT RECTOR  
 JAN WILSON  
 KATHRYN WURZEL

January 15, 1988

TO: Stewart Freeman, Assistant In Charge  
 Environmental Protection Division  
 Department of Attorney General

FROM: Robert Miller, Chief  
 Air Quality Division  
 Department of Natural Resources

SUBJECT: Kelley et al v Michigan Standard Alloys  
Consent Judgement, Dated May, 1981 File \_\_\_\_\_

At last I am providing a final response to your September 1, 1987 memorandum to Mr. Delbert Rector regarding whether cleanup has been completed in accordance with the consent judgement.

The cleanup has been satisfactorily completed and the Department is agreeable to closing this action.

RPM:DJB:mg

Attachment

cc: Mr. D. Rector, DNR  
 Mr. D. Immen, w/attachment, DNR  
 Mr. R. Johns, w/attachment, DNR  
 Mr. D. Drake, DNR  
 Mr. G. Guenther, DNR  
 Mr. J. Truchan, DNR  
 Mr. F. Baldwin, DNR  
 Ms. B. Rosenbaum, DNR  
 Mr. R. VandaBunt, DNR

BGR  
 for Bob

RECEIVED

RECEIVED

FEB 3 1988

FEB 19 1988

Management Division

WMD-PLAINWELL

INTEROFFICE COMMUNICATION

October 22, 1997

RECEIVED

OCT 22 1997

ERD - Plainwell

TO: Sylvia Heaton, GLEAS

FROM: Maggie Fields, Plainwell District

SUBJECT: ALRECO/Reynolds Metals Permit Termination  
NPDES MI0028568

Alreco has requested termination of their NPDES permit. The aluminum smelter was closed about two years ago. A pending sale reportedly includes an agreement leaving Reynolds with responsibility and liability for any onsite contamination or discharge. It is our understanding the new owners will not have any discharges. The existing NPDES permit was issued in 1987. It covered only two of the eight outfalls. The 1992 permit application listed only one permitted outfall (006) and five other outfalls for stormwater and groundwater seepage only.

The site was known to have contamination. Prior to terminating the permit, an assessment was needed of the possible groundwater contamination seepage into the outfalls. The groundwater data provided did not review this impact. On August 26, 1997, I sampled the outfalls found discharging. They consisted of three, 002, 003, and 006. All were reportedly stormwater and groundwater seepage only. The entire plant was closed and not operating. It had rained about two days earlier but not within 24 hours of the sampling.

In particular, the copper and zinc levels in Outfall 002, presently an unpermitted outfall, appear to be above levels of concern. Please review the results below and advise whether these discharges need to be regulated or whether the permit may be terminated.

(in ppb)	Sample #1 = 003	Sample #2 = 006	Sample #3 = 002.
Aluminum	290	1500	7200
Barium	33	250	120
Beryllium	ND	ND	ND
Cadmium	0.4	1.1	1.7
Chromium	ND	2.2	10
Copper	5	52	210
Molybdenum	ND	ND	ND
Nickel	ND	4.6	16
Lead	1.1	7.2	8.8
Titanium	ND	11	29
Vanadium	ND	ND	ND
Zinc	96	142	815

cc: Fred Morley, SWQD Supervisor  
Jenny Molloy, SWQD Stormwater  
Jeff Spruit, ERD

*Maggie*

Jeff Spruitt  
Alreco  
Bernier Co

STATE OF MICHIGAN



JOHN ENGLER, Governor

**DEPARTMENT OF ENVIRONMENTAL QUALITY**

HOLLISTER BUILDING, PO BOX 30473, LANSING MI 48909-7973

INTERNET: <http://www.deq.state.mi.us>

RUSSELL J. HARDING, Director

REPLY TO:

PLAINWELL DISTRICT OFFICE  
621 N 10TH ST  
PO BOX 355  
PLAINWELL MI 49080-0355

February 10, 1997

RECEIVED

FEB 13 1997

ERD - Plainwell

Alan C. Schwartz  
Miller, Johnson, Snell & Cumiskey, P.L.C.  
800 Calder Plaza Building  
260 Monroe Avenue NW  
Grand Rapids, Michigan 49503

Dear Mr. Schwartz:

This letter follows my inspection of the Alreco Metals, Inc. facility on January 30, 1997 with Ms. Margaret Fields to determine whether termination of the two NPDES permits currently issued to the facility can be terminated as requested. At this time we find that termination of permit coverage is premature. Mr. Jerry Kirby assisted us with our inspection. We also talked with Ms. Brenda Hunt, Alreco Metals, and Mr. Jeffrey Dahnke, AARES Limited, during our visit.

During our inspection we observed considerable amounts of material stored and disposed of outside. Scrap bins full of rusty metal, wood and trash, fuel tanks with containment areas full to the brim with ice, palettes, drums, propane cylinders, aluminum slag, shards of aluminum, and a variety of miscellaneous scrap material were abundant in the areas around the building. In addition, the berm around the bag house has several breaches that should be closed. As I discussed with Mr. Kirby, because of exposure of significant materials, most in close proximity to storm drain inlets and the surrounding wetlands, the storm water certificate of coverage (MIR20P064) must remain in effect. In addition, as I mentioned also to Mr. Kirby, I will need to see drainage blueprints or plans which indicate where all connections from within and without the facility discharge. When all exposure has been eliminated, I will conduct another inspection to determine if the certificate of coverage can be terminated.

Because of the substantial amount of snow cover during our inspection it was not possible to determine the status of the outfalls. However, during our inspection we learned that there are most likely ongoing discharges because of the connection of ground water and storm water to some systems. Therefore we also cannot terminate NPDES permit MI0028568 at this time. We will conduct another inspection of Alreco Metals in a few weeks to inspect the outfalls. Because of the potential concerns for environmental contamination at the site we will sample any discharges from the outfalls on our return visit.

During our visit Mr. Kirby and Mr. Dahnke noted that there was some concern about PCBs in transformers and capacitors. Ms. Fields recommended to Mr. Kirby that the hydraulics oil in the furnaces may also contain PCBs and should be evaluated.

Alan Schwartz  
February 10, 1997  
Page 2

Please be advised that since permit coverage remains in effect, Alreco Metals is subject to the conditions in the permits, including storm water pollution prevention and submission of discharge monitoring reports. We understand that the facility is under evaluation by potential buyers who plan a more refined dross processing operation. We would like to facilitate an easy transfer of ownership with respect to surface water discharge permitting. However, because of the potential impacts to water quality we cannot allow permit noncompliance indefinitely.

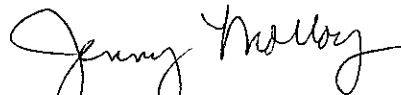
We will suspend storm water pollution prevention plan development and discharge monitoring reporting for an additional 30 days. By March 12, 1997 we expect that exposure of all significant materials will be eliminated. I will then conduct another inspection of the facility. If this condition has been met and I can satisfactorily determine from the blueprints that there are no unpermitted discharges, I will terminate storm water coverage. If not, I will request that a storm water pollution prevention plan be developed and implemented.

During our next inspection we will also sample the outfalls. Should results of our sampling indicate that there are no discharges, or that discharges are only of uncontaminated ground water or storm water, we will terminate NPDES permit MI0028568. However, should our sampling indicate otherwise, the permit will remain in effect and we will expect regular submission of discharge monitoring reports until such time as the facility is sold, or permitted discharges are eliminated.

We will plan to conduct our follow-up inspection in mid-March. The specific date will depend upon communication from you regarding elimination of exposure, and also upon weather conditions which will allow us access to all outfalls. We will also be happy to provide information to the potential buyers should they have questions about their permit obligations.

Please call me or Ms. Fields (616-685-0027) if you have any questions.

Sincerely,



Jenny Molloy  
Surface Water Quality Division  
616-685-0032

JM:cab

cc: Mr. Jerry Kirby, K K Electrical Contracting  
Mr. Jeffrey L. Dahnke, AARES Ltd.  
Mr. Jeff Spruitt, MDEQ, ERD  
Ms. Margaret Fields, MDEQ, SWQ

**AARES, Ltd., ENVIRONMENTAL CONSULTANTS**

December 9, 1996

Mr. Jeff Spruit  
Michigan Department of Natural Resources  
Environmental Response Division  
1342 SR-89, Suite B  
Plainwell, Michigan 49080-1915

RECEIVED

DEC 11 1996

ERD - Plainwell

Re: Confirmed Release at the former Alreco Metals facility, 900 Alreco Road, Benton Harbor, Michigan.

Mr. Spruit:

Tobian Metals (proposed purchaser) contracted with AARES, Ltd., Environmental Consultants (AARES), to determine if the former Alreco Metals, Inc. property (proposed seller) would fall under the criteria of a "facility" as defined in NREPA Part 201. In November, 1996, AARES field personnel advanced a series of geoprobe borings in the vicinity of the 250,000 gallon AST system, the former underground storage (UST) tank farm and the two heating oil USTs near the office building. Several discrete soil and groundwater samples were collected and were analyzed for BTEX and PNA.

Several samples collected in the vicinity of the tank farm detected BTEX and PNA constituents at levels which exceed those set forth in the Michigan Environmental Response Act (MERA) Operational Memorandum #8, Revision #4 and MERA Operational Memorandum #14, Revision #1. A copy of the analytical results from a groundwater sample collected in the vicinity of the tank farm is attached to support our position.

This letter is submitted to establish that the site constitutes a "facility" for purposes of NREPA Part 201, and to satisfy any reporting requirements of Alreco Metals, Inc. It has not been confirmed that the contamination was caused by a release from any of the USTs at this site. AARES is now focusing it's attention towards preparing a Class C Baseline Environmental Assessment (BEA). Should you have any further questions, please contact me at 616-343-7000.

Sincerely,



John Cuthbertson, CPG  
Senior Project Geologist



47930 West Road • Wixom, Michigan 48393  
Phone: (810) 624-3090 • Fax: (810) 624-3095

To: AARES LTD.  
5081 Wynn Road  
Kalamazoo, MI 49001

Date: 12/04/96

Project Name: Alreco Metals  
Collection Date: 11/22/96

Eagle Report Number: 12017  
Eagle Sample ID: EL50256

Sample Description: Tank Farm SB-11 GW 96339

Parameters	Results	Units	MDL	Method	Analysis Date	Analyst
<b>BTEX Analysis</b>						
Benzene	660	ug/L	50	EPA 602	12/03/96	GTM
Toluene	1000	ug/L	50	EPA 602	12/03/96	GTM
Ethyl benzene	2000	ug/L	50	EPA 602	12/03/96	GTM
Xylene	8100	ug/L	150	EPA 602	12/03/96	GTM
<b>PNA Analysis</b>						
Acenaphthene	Not det	ug/L	5	SW846 8310	11/29/96	GTM
Acenaphthylene	220	ug/L	5	SW846 8310	11/29/96	GTM
Anthracene	5	ug/L	5	SW846 8310	11/29/96	GTM
Benzo(a)anthracene	Not det	ug/L	5	SW846 8310	11/29/96	GTM
Benzo(a)pyrene	Not det	ug/L	5	SW846 8310	11/29/96	GTM
Benzo(b)fluoranthene	Not det	ug/L	5	SW846 8310	11/29/96	GTM
Benzo(g,h,i)perylene	Not det	ug/L	5	SW846 8310	11/29/96	GTM
Benzo(k)fluoranthene	Not det	ug/L	5	SW846 8310	11/29/96	GTM
Chrysene	Not det	ug/L	5	SW846 8310	11/29/96	GTM
Dibenzo(a,h)anthracene	Not det	ug/L	5	SW846 8310	11/29/96	GTM
Fluoranthene	74	ug/L	5	SW846 8310	11/29/96	GTM
Fluorene	14	ug/L	5	SW846 8310	11/29/96	GTM
Indeno(1,2,3-cd)pyrene	Not det	ug/L	5	SW846 8310	11/29/96	GTM
Naphthalene	520	ug/L	5	SW846 8310	11/29/96	GTM
Phenanthrene	36	ug/L	5	SW846 8310	11/29/96	GTM
Pyrene	110	ug/L	5	SW846 8310	11/29/96	GTM
2-Methylnaphthalene						
Extraction	NA			SW846 3510	11/28/96	GCG

Not det: Not detected above the MDL

Reviewed by \_\_\_\_\_

Date \_\_\_\_\_

**PERSONAL COMMUNICATION PLANNER**

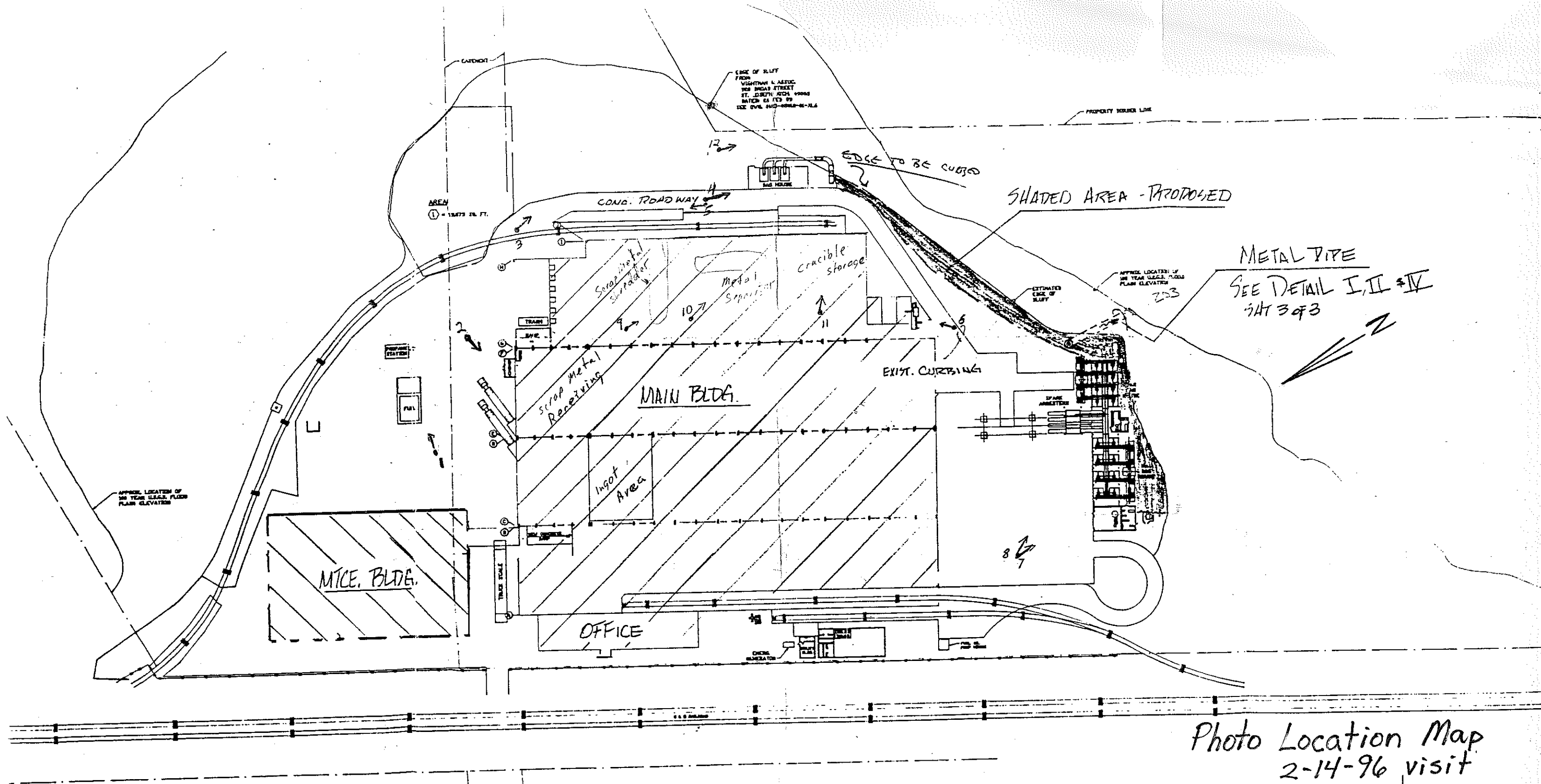
Name William Cochran  
 Company Cornerstone Alliance  
 Address \_\_\_\_\_

✓ = Task Completed  
 → = Planned Forward  
 x = Task Deleted  
 G⊙ = Delegated Task  
 • = In Process

Phone 616-925-6978 ext 210

✓	Date	Topic	Reply
✓	7-30	Returning Mr. Cochran's phone call to Linn Duling yesterday, 7-29-96, regarding the Alreco <del>Site</del> site in Benton Harbor.	
✓	7-30	How can I help you?	I would like to know what the results of the investigation that I understand MDEQ had conducted this past winter.
✓	7-30	We didn't conduct an investigation per se. We basically toured the site with Todd Bronkema, the plant engineer. He took us through the plant, leading us through the Aluminum recycling operation step-by-step. We wanted to find out what, if any environmental problems exist there so we could request money from the legislature to conduct an investigation.	
✓	7-30		We've been getting some

✓	Date	Topic	Reply
		facility we had some concerns after reviewing our existing file material such as the bag house dust and PCB transformers. We were encouraged to see the bag house dust being removed as we toured the plant and were equally pleased to see that the PCB transformers had been removed.	
✓	7-30	Our only remaining concern is "Has <del>all</del> the aluminum cross removed as indicated by our file material? Is there any remaining impact to the adjacent wetland?" We've requested funding from the legislature to conduct a small investigation to answer those remaining concerns. This fund request was for FY97 funds. <del>FY</del> FY 97 begins in Oct. <del>97</del> The funds may not be available to us until later in the FY. Would you like for us to give you a call later as this project progresses.	
✓	7-30		Yes, that would be helpful.



PLAN VIEW

1" = 100'

NOTE

ALL WORK SHALL  
TO THE FOLLOWING  
SPECIFICATIONS

## **PHOTO LOG**

### **ALRECO METALS**

**Benton Harbor**

**Berrien County**

**MERA #: 110021**

**Date: 2-14-96**

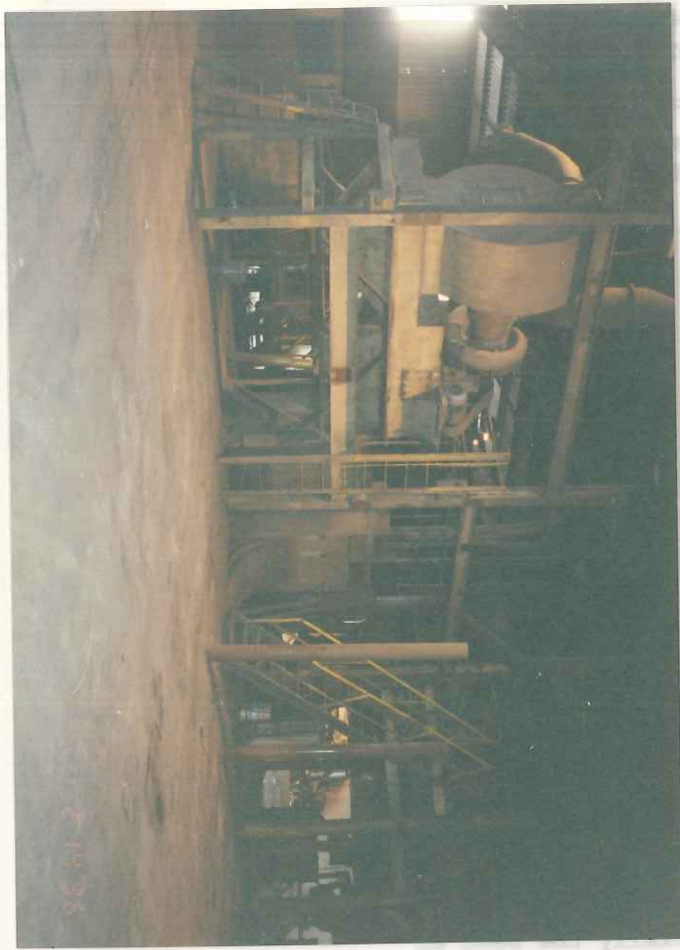
#### **PHOTO NUMBER**

#### **DESCRIPTION**

- |        |  |
|--------|--|
| 1.     | View, looking easterly, of fueling island and propane station (in background) near the Maintenance Building.                 |
| 2.     | View, looking westerly, of containerized solid waste and electrical transformers located east-southeast of the truck scales. |
| 3.     | View, looking southerly, of piles of recyclable aluminum.  |
| 4.     | View, looking southerly, of baghouse at the back (southeast side) of plant.  |
| 5.     | View, looking northerly, of another baghouse at the back east side) of the plant.  |
| 6.     | View, looking northeasterly, of scrap metal baghouse on the southwest side of the building.                                  |
| 7 & 8. | View, looking southerly, of the large baghouse complex at the southwest side of the building.                                |
| 9.     | View, inside plant, of the scrap metal shredder.   |
| 10.    | View, inside plant, of the metal separator.  |
| 11.    | View, inside of plant, of the crucible storage area.   |
| 12.    | View, of a monitoring well located at the back (southeast side) of the plant .   |









900 Alreco Road / Benton Harbor, Michigan 49022  
Phone: (616) 925-5905

*Log & File*

January 5, 1993

Mr. Fred Morley, District Supervisor  
Surface Water Quality Division  
Department of Natural Resources  
District 12 Headquarters  
P.O. Box 355  
Plainwell, Michigan 49080

RECEIVED

JAN 06 1993

SWQD-Plainwell

Dear Mr. Morley;

In accordance with our NPDES Permit No. MI-0028568, Part 1, Section B.2.b, we are hereby certifying compliance with our operating permit on Outfall 006 for the year 1992. Specifically, we are maintaining a Year-to-Date log on the Outfall, and the flow rate has not changed substantially from the permitted rates.

If you should have any questions regarding this matter, please feel free to call me at (616)926-4551.

Sincerely,

*Todd Romkema*

Todd Romkema  
Plant Engineer

cc: P. D. Webb - ALRECO  
J. C. Brown - RMC



900 Alreco Road / Benton Harbor, Michigan 49022  
Phone: (616) 925-5905

January 24, 1992

Mr. Scott K. Hanshue  
Surface Water Quality Division  
District No. 12  
Department of Natural Resources  
P.O. Box 355  
Plainwell, Michigan 49080

SUBJECT: NPDES Permit No. MI0028568, Outfall 006

Dear Mr. Hanshue:

As requested, I am formally responding to your letter of December 20, 1991.

I have reviewed the results of samples taken of Outfall 006 on September 23, 1991, and compared them to analysis submitted with our 1987 permit application. The 1991 results are not inconsistent with the results we submitted in 1987. Consequently, do not feel the September '91 test results show 'elevated' levels of metals.

We are, however in the process of reviewing the discharge of Outfall 006, as well as 'background' samples of ground and surface water in order to determine any identifiable source of the metals. We will keep you informed of our progress.

In the mean time, we would be very appreciative of any information you may already have on water quality in the Paw Paw river in the immediate vicinity of the plant site, both up and down stream.

Finally, we have sent previously under separate cover, our annual certification for retained self-monitoring, for calendar year 1991. If you have any questions or not yet received it, please let me know.

Please feel free to contact me with any questions you might have at (616) 926-4551.

Sincerely,

A handwritten signature in cursive script that reads "Todd Romkema".

Todd Romkema  
Plant Engineer

RECEIVED

JAN 30 1992

SWQD-Plainwell

SWQ920124/TRDNR/QTXT

*file*



900 Alreco Road / Benton Harbor, Michigan 49022  
Phone: (616) 925-5905

January 7, 1992

Mr. Scott K. Hanshue  
Department of Natural Resources  
Surface Water Quality Division  
District 12 Headquarters  
P.O. Box 355  
Plainwell, Michigan 49080

Dear Sir;

In accordance with our NPDES Permit Number MI0028568, Part 1. Section B.2.b., we are hereby certifying compliance with our operating permit on Outfall 006 for the year 1991. Specifically, we are maintaining a Year-To-Date Log on the Outfall, and the flow rate from the Outfall has not changed substantially from the permitted rates.

If you should have any questions regarding this matter, please feel free to call me at (616) 926-4551.

Sincerely,

  
Todd Romkema  
Plant Engineer

CC: P.D. Webb - ALRECO  
J.C. Brown - RMC

DNR920107/TR92/QTXT

STATE OF MICHIGAN



NATURAL RESOURCES COMMISSION

LARRY DEVUYST  
PAUL EISELE  
MARLENE J. FLUHARTY  
GORDON E. GUYER  
DAVID HOLLI  
O. STEWART MYERS  
RAYMOND POUPORE

JOHN ENGLER, Governor

DEPARTMENT OF NATURAL RESOURCES

ROLAND HARMES, Director

District 12 Headquarters  
P.O. Box 355, Plainwell, Michigan 49080

January 6, 1992

Todd A. Romkema  
Reynolds Metals-Alreco  
900 Alreco Road  
Benton Harbor, MI 49022

Dear Mr. Romkema:

SUBJECT: NPDES Permit No. MI0028568

This letter shall serve as a reminder of the reporting requirements of the above referenced permit. Part I.B. of the permit requires the following written certification be submitted to this office.

The permittee shall certify, in writing, to the Chief of the Surface Water Quality Division of the Department of Natural Resources in accordance with the Schedule of Compliance, Part I.C.2, that;

- (1) all retained self-monitoring requirements have been complied with and a year to date log has been maintained,
- (2) the flow rate(s) (if part of retained self-monitoring results) from all outfalls have been substantially the same as the flow rate(s) authorized by this permit, or if
- (3) the flow rate(s) (if part of the retained self-monitoring results) is (are) substantially different from the flow rate(s) authorized by this permit and the permittee shall provide reasons for the difference in flow rates.

On or before January 10th of each year, during the effectiveness of this permit, the permittee shall submit the retained self-monitoring written certification as required in the Monitoring and Reporting Section, Part I.B.2.

You are requested to submit the above certification to this office as soon as possible. Any questions in regard to this matter may be directed to me at this office.

Sincerely,

A handwritten signature in dark ink, appearing to read "Scott K. Hanshue".

Scott K. Hanshue  
Surface Water Quality Division  
616-685-9886

C/E File

xc: Tom keep

NATURAL RESOURCES COMMISSION  
THOMAS J. ANDERSON  
MARLENE J. FLUHARTY  
KERRY KAMMER  
O. STEWART MYERS  
DAVID O. OLSON  
RAYMOND POUPORE

STATE OF MICHIGAN



JAMES J. BLANCHARD, Governor

DEPARTMENT OF NATURAL RESOURCES

STEVENS T. MASON BUILDING  
BOX 30028  
LANSING, MI 48909

GORDON E. GUYER, Director

AIR POLLUTION CONTROL COMMISSION  
LEE E. JAGER, CHAIRMAN  
JEANETTE R. ARMSTRONG  
RUSSEL E. GOSSMAN  
ALAN M. GREENBERG  
RICHARD E. HONICKY, M.D.  
NICHOLAS C. KACHMAN  
CHRISTINE LIETZAU  
FRANK P. PARTEE  
DELBERT RECTOR  
JAN WILSON  
KATHRYN WURZEL

January 15, 1988

TO: Stewart Freeman, Assistant In Charge  
Environmental Protection Division  
Department of Attorney General

FROM: Robert Miller, Chief  
Air Quality Division  
Department of Natural Resources

SUBJECT: Kelley et al v Michigan Standard Alloys  
Consent Judgement, Dated May, 1981 File \_\_\_\_\_

At last I am providing a final response to your September 1, 1987 memorandum to Mr. Delbert Rector regarding whether cleanup has been completed in accordance with the consent judgement.

The cleanup has been satisfactorily completed and the Department is agreeable to closing this action.

RPM:DJB:ma

Attachment

cc: Mr. D. Rector, DNR  
Mr. D. Inman, w/attachment, DNR  
Mr. R. Johns, w/attachment, DNR  
Mr. D. Drake, DNR  
Mr. G. Guenther, DNR  
Mr. J. Truchan, DNR  
Mr. F. Baldwin, DNR  
Ms. B. Rosenbaum, DNR  
Mr. R. VandeBunt, DNR

BJR  
for Bob

RECEIVED

RECEIVED

19 1988

FEB 3 1988

Waste Management  
Division

WMD-PLAINWELL

MICHIGAN DEPARTMENT OF NATURAL RESOURCES

INTEROFFICE COMMUNICATION

October 19, 1987

TO: Dennis Drake, Compliance Chief  
Waste Management Division

Frank Baldwin, Compliance Chief  
Surface Water Quality Division

James Truchan, Compliance Chief  
Environmental Response Division

FROM: David Batchelor, Compliance & Enforcement  
Air Quality Division

SUBJECT: Michigan Standard Alloys  
Berrien County Circuit Court File No. 79-1225-CZ-Z  
Consent Judgement, Dated May 5, 1981

RECEIVED  
OCT 29 1987  
ERD-PLAINWELL

Stewart Freeman has asked Del Rector to provide a determination as to whether clean-up has been completed in accordance with the attached judgement.

By memo dated September 21, 1987 Dick VandeBunt, Plainwell District Air Quality Division was asked to coordinate this review with other divisions.

Dick VandeBunt has advised me that the Air Quality Division feels clean-up has been satisfactorily completed. However, he did not receive any information from each of your divisions regarding whether all contaminated materials had been removed, or whether you have any environmental concerns pertaining to the extent to which clean-up has been completed.

Would each of you please review the attached materials, check with your staff and advise whether clean-up has been satisfactorily completed. If so, the case can be closed. I would appreciate a response by October 30, 1987.

Your attention to and cooperation in this matter is appreciated.

DB:ma

Enclosure: Consent Judgement, and August 20, 1987 company letter with records attached.

cc: S. Freeman  
D. Rector  
B. Miller  
R. Johns  
D. VandeBunt

Batchelor

STATE OF MICHIGAN

IN THE CIRCUIT COURT FOR THE COUNTY OF BERRIEN

THE PEOPLE OF THE STATE OF MICHIGAN  
by FRANK J. KELLEY, Attorney General of  
the State of Michigan; Frank J.  
Kelley, ex rel MICHIGAN NATURAL RESOURCES  
COMMISSION; Frank J. Kelley, ex rel  
MICHIGAN WATER RESOURCES COMMISSION; and  
HOWARD A. TANNER, Director of the Michigan  
Department of Natural Resources,

Plaintiffs,

v.

No. 79-1225-CZ-Z

MICHIGAN STANDARD ALLOYS,  
a Michigan Corporation,

Defendant.

Harry G. Grier  
615-983-7333

CONSENT JUDGMENT

At the Session of said Court, held in  
Circuit Courtrooms, City of St. Joseph,  
County of Berrien, State of Michigan, on  
the 5 day of May, 1981.

PRESENT: HONORABLE ZOE S. BURKHOLZ  
Circuit Judge.

PROCESSED  
JUN 1 1981

The parties having agreed by their approval as to form  
and content that a Judgment may be entered in this cause,  
incorporating the following terms and conditions, and the  
Court being fully advised in the premises:

The Court finds that the terms and conditions of this  
Judgment are reasonable, that they adequately resolve the  
issues raised in this action including a program for eliminating  
any possible threat to the air, lands, and waters of this  
State, and they properly protect the interests of the  
People of the State of Michigan.



IT IS, THEREFORE, ORDERED AND ADJUDGED that:

1. The terms and conditions herein are adopted as the Judgment of this Court.

2. Michigan Standard Alloys, Inc. (hereinafter "Michigan Standard") shall remove and dispose of all dross residues and any other intermixed material located in and around Michigan Standard's Mendel Road aluminum plant premises, unless barred by the affected property owner if other than Michigan Standard, as indicated on the photograph attached to this Consent Judgment. Michigan Standard shall remove and dispose of the dross residues in a manner acceptable to the Michigan Department of Natural Resources (hereinafter "DNR") and shall excavate to the virgin soil as approved by the DNR on-site representative. More soils may have to be removed if the study required by paragraph 15 reveals unacceptable contamination in those soils. Selected representative undisturbed off-site and surrounding soil shall be the basis for determining unacceptable levels of contamination of the on-site soils.

3. Michigan Standard shall use the following equipment in the removal and disposal of the dross residues:

- (a) Two 5-cubic-yard bucket front-end loaders
- (b) One 7-1/2-cubic-yard bucket front-end loader
- (c) One excavation crane
- (d) Two support dozers
- (e) One street cleaner
- (f) Up to twelve semi-trucks with double-bottom trailers

- (g) Water hoses and sprinklers
- (h) Ross Field's weather station's wind, speed, and direction records or a weather station (continuous recording) installed by Michigan Standard
- (i) Four (4) high-volume (Hi-Vol) air samplers.

4. Utilization of Equipment: Two front-end loaders will be used for loading the double-bottom train trailers at all times. The third loader will be used to bring up material from the excavation crane. The crane will be used to dig the lower portion of the affected areas and all slopes. The support dozers will be used to push materials to the loaders if necessary.

If Ross Field data are not used, equipment for continuously monitoring and recording wind speed and wind direction will be set up and employed at the removal site. The four Hi-Vol samplers will be used to determine the level of total suspended particulate at the property line. The Hi-Vol samplers will be in operation each day from midnight to midnight. The results of any 24-hour reading from the Hi-Vol samplers shall be made available within three (3) days.

The type and location of all air and wind monitoring and recording equipment must be approved by the DNR. Data from these monitors shall be available at the removal site for inspection upon request by the DNR. Upon completion of the project, a copy of all recorded data shall be submitted to the DNR.

5. Climatological Conditions: Michigan Standard shall evaluate weather conditions to determine the feasibility

of continuing removal operations on any work day. Of particular concern is wind blowing from the East to South sector at greater than 15 mph. Michigan Standard shall check wind speed and wind direction at the beginning of every day and subsequently every three (3) hours during the normal daily operating period. If more than 50 percent of the readings from the weather station for the previous three (3) hours are in the East to South sector and at greater than 15 mph, Michigan Standard shall promptly notify the authorized DNR representative of the conditions and request instructions regarding the continuation of the dross residue removal operations. If necessary to prevent excessive fugitive dust, the removal operations shall cease if so notified by the authorized DNR representative until the weather allows resumption of removal operations.

6. Michigan Standard shall begin removal of the dross residues in a direction eastwardly from the end of the dross mill discharge conveyor and will proceed on a northerly or southerly course, depending upon the wind direction. Attention shall be given to the containment of fugitive dust from the dross pile and from roadways used for hauling, the latter to be kept clean with the daily use of the street cleaner. Sweepings collected by the cleaner will be deposited on-site for disposal at the landfill. The final site grading shall leave surfaces with all slopes not to exceed one foot of rise for every three feet of horizontal distance. A steeper grade may be approved by the DNR to prevent an undue filling of the Paw Paw River flood plain. Upon completion of the dross (and contaminated soil, if any) removal programs, Michigan Standard shall seed the excavated areas with a suitable vegetative cover.

7. Michigan Standard shall control soil erosion by the placement of sediment traps using multiple rows of straw bales or other DNR approved erosion control procedures adequately anchored in the ground. Sediment traps shall be arranged throughout the site in accordance with prudent soil conservation technique. Michigan Standard shall maintain the sediment traps until the vegetative cover has become well established.

8. Control of Fugitive Dust at Removal Site:

- (a) During the removal process, the total suspended particulate shall not exceed 150 micrograms per cubic meter at the property line on a twenty-four (24)-hour average.
- (b) All roadways at the removal site shall be kept clean with the street cleaner. This street cleaning operation shall be performed twice daily (at approximately mid-day and at the end of the normal operating period) unless otherwise instructed by the designated DNR representative.
- (c) If an area or depth of the existing dross waste pile is discovered to be without moisture and causing a fugitive dust problem, Michigan Standard shall apply water to prevent fugitive dust emissions.
- (d) It is anticipated that fugitive dust from the outer dross crust will be minimal, provided there is sufficient precipitation to keep the surface moisture laden. If dry conditions do occur in the outer crust and if notified by the DNR, water will be applied to all dry areas of outer crust within 24 hours of notification. Water will be applied evenly on all dry areas of the outer crust in an amount sufficient to moisten it.

9. Tractors and double bottom trailers will transport the dross residue to the landfill operated by Land Fill Management Company, Orchard Hills, 3378 Hennesey Road, Watervliet. The trailers have a combined capacity of approximately 40 yds<sup>3</sup>/load. The utilization of up to twelve trucks on a 5 or 6 day weekly basis is projected to remove all of the dross residues and contaminated soils, if any, within a 3 month period. The normal daily operating period will be from 6:00 a.m. to 7:00 p.m., Monday through Friday and from 6:00 a.m. to 5:00 p.m. Saturday, if indicated.

10. After loading, each trailer will be weighed at the Michigan Standard truck garage. Michigan Standard shall examine each load to ensure that all waste is at least six inches below the top of the trailer and then properly tarped. If an outgoing load fails to meet these requirements, Michigan Standard shall take the proper corrective actions before the truck leaves the site. Records indicating the trailer license plate number or other means of identification approved by the DNR, net weight and date and time of shipment shall be maintained and be made available to the DNR at the security guard building for each load of material removed from the site. Upon completion of the project a copy of those records shall be submitted to the DNR.

11. Trucks will proceed from Michigan Standard's dross residue site to Arthur Mendel Road; then west to Paw Paw Avenue (M-139); then south to Main Street, Benton Harbor; then to I-94 Penetrator to I-94 east, leaving at Exit 41 (M-140); then south to Dan Smith Road; then west to Hennesey Road and to the landfill site in Watervliet.

12. The disposal of the dross residues will be accomplished at the landfill identified in paragraph 9. The residues shall be deposited into DNR approved areas at the landfill.

13. In the event that dust problems do occur at the landfill, additional moisture shall be added at the plant, landfill or both as needed. The designated DNR representative shall determine the need for additional measures to control dross dust at the landfill.

14. The waste removal and disposal program shall be monitored and supervised by the excavation contractor and by Michigan Standard designated employees to insure compliance with this proposal. The DNR shall designate by letter to be sent no later than May 1, 1981 an on-site representative and alternates who shall have the authority, exercising sound discretion, to discontinue operations if the project is causing the release of significant amounts of fugitive dust, chemical odors or other potentially hazardous conditions. The DNR representatives shall have authority to enter upon the plant property during all removal operations for the purpose of supervising work operations and sampling air, water, and solid waste. The on-site inspectors shall be able to inspect all records pertinent to the removal project and check all sediment traps installed by the company.

15. Within sixty (60) days of the entry of this Order, Michigan Standard shall complete a proposal for a study to determine the existing hydrogeological conditions, including groundwater quality, in the vicinity immediately

surrounding and including the Michigan Standard's premises. The study shall be prepared by or under the direction of a qualified groundwater or engineering geologist or a registered professional engineer with assistance from experts in the appropriate related fields and shall be submitted to the DNR for review and approval before implementation. The study shall establish, as a minimum, the following:

- A. The direction, rate and gradient of groundwater flow.
- B. The horizontal and vertical extent of groundwater contamination, if any, resulting from past and present disposal practices as determined by analyses of groundwater samples taken at various locations and vertical depths as outlined in the study plan.
- C. The horizontal and vertical extent of soil contamination, if any, on the property as determined by analyses of soil samples taken at various locations and vertical depths as outlined in the study plan.
- D. Alternative remedial actions to remove, contain, and treat all contaminated soils and groundwater caused by Michigan Standard's operations and identified by the study required by this paragraph.
- E. The impact of contamination, if any, on the Paw Paw River caused by Michigan Standard's operations.

16. The hydrogeologic study shall be completed by October 1, 1981 and a final report submitted by November 1, 1981.

17. The hydrogeologic study shall conform to the requirements of the Michigan Water Resources Commission's groundwater quality regulations, R 323.2201 to R 323.2211.

18. Within ninety (90) days of submission of the final hydrogeological report, Michigan Standard shall submit a remedial plan, if the paragraph 15 hydrogeological study reveals violations of state water quality regulations, R 323.2201 to R 323.2211 and R 323.1041 to R 323.1116, including an implementation schedule for DNR review and

approval. Michigan Standard shall commence the remedial plan thirty (30) days from the receipt of DNR approval and complete all work in accordance with the DNR approved implementation schedule.

19. If the hydrogeologic report reveals that contaminants in the groundwater beneath Michigan Standard's aluminum plant property did not originate from Michigan Standard's premises, Michigan Standard shall have no obligation to treat that portion of the contaminated groundwater.

20. In the event that the hydrogeological study required by paragraph 15 demonstrates that private property has groundwater contaminants originating from the Michigan Standard's property, and the Berrien County or State Health Department determines that water wells on these properties are not fit for domestic use due to such contamination, Michigan Standard agrees to provide a permanent supply of potable water to the affected private property.

21. Michigan Standard shall maintain and operate all measures included within the remedial programs approved under the terms of this Consent Judgment.

22. Michigan Standard shall pay to the State of Michigan the sum of Fifty Thousand Dollars (\$50,000.00) upon entry of this Consent Judgment to reimburse the People of the State of Michigan for costs incurred by the State.

23. In consideration of the entry of this Consent Judgment and Michigan Standard's full compliance with all of the Consent Judgment's terms and conditions, Plaintiffs

will dismiss its Complaint in this matter with prejudice  
and without further costs to either party.

24. All parties have committed themselves to work  
together in good faith. None of the parties shall act in an  
arbitrary or capricious manner in discharging their duties  
set forth in this Consent Judgment.

25. The Court retains jurisdiction over all parties  
to enforce compliance with all conditions of this Consent Judgment.

*acting for*  
ZOE S. BURKHOLDER  
P11422  
Circuit Judge

Approved as to Form  
and Content:

FRANK J. KELLEY  
Attorney General

Stewart H. Freeman (P 13692)  
Assistant Attorney General

By: *Thomas F. Schimpf*

Thomas F. Schimpf (P 23068)  
Assistant Attorney General

Attorneys for Plaintiffs

*Harry W. Creager*  
Harry W. Creager (P 12331)

Attorney for Defendant

STATE OF MICHIGAN  
CIRCUIT COURT FOR COUNTY OF TARRANT  
I certify that I have compared this copy with  
the original on file in this court and that it is a  
correct copy of the original.

MAY 5 1991

FORREST M. KESTERKE, Clerk  
C/ *Shirley G. Kesterke*

K E L L E R • K E L L E R C R E A G E R

August 20, 1987

Attorneys at Law

Dept. of Attorney General  
**ECONOMIC DEVELOPMENT  
AND INVESTMENT**

AUG 25 1987

**RECEIVED**

Mr. Thomas F. Schimpf  
Asst. Attorney General  
Law Building  
525 W. Ottawa St.  
Lansing, MI 48933

Re: Michigan Standard Alloys ads. State  
Our File No. 530-001

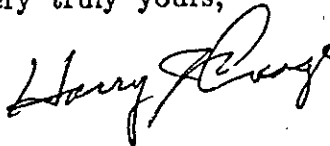
Dear Mr. Schimpf:

My records indicate that I already sent the enclosed materials to the attention of Dennis Drake, although I don't believe I received any acknowledgement thereof. These are all of the records I have available in my file concerning subsequent testing at the former Aluminum Division site of Michigan Standard Alloys.

This case remains open in Berrien County Circuit Court, and Court personnel would like to know when we are going to finalize it. I believe we have complied with all of the terms and conditions of the Consent Judgment, and I respectfully request that your office file a formal Satisfaction of Judgment so this matter will come to an end. I believe sufficient time has gone by for you to continue to pursue 'bigger fish' than the now-defunct Aluminum Division of Michigan Standard Alloys.

With best regards, I remain,

Very truly yours,



Harry J. Creager

HJC/lb  
Encs.

cc: Michigan Standard Alloys  
Attention: Herbert D. Mendel

# DIVISION OF AIR POLLUTION CONTROL

## AIR QUALITY DATA

(Name) \_\_\_\_\_  
 Pollutant (Code) 2 1 1 0 1  
 (2-6)

Agency 5 Project 02 Time 7 Year 91 Method 01 Units 0 DP 0  
 (17) (2-8) (6-9) (13-14) (15-16) (17)

Note: DP = number of digits to right of decimal

MASSN No. Co. Site	STATION NAME	STATION CODE Sides Section Sides	Sample Date Month Day (27-28) (29-30)	Value (31-34)	Sample Date Month Day (35-36) (37-38)	Value (39-42)	Sample Date Month Day (43-44) (45-46)	Value (47-50)	Sample Date Month Day (51-52) (53-54)	Value (55-58)	Sample Date Month Day (59-60) (61-62)	Value (63-66)
11 901		23 99 11 901	05 16	78.53	05 18	232.06	05 20	270.97	05 22	210.40	05 24	73.20
11 902		23 99 11 902							05 22	50.47	05 24	58.22
903		23 99 11 903							05 22	312.38	05 24	109.04
11 904		23 99 11 904	05 16	1010	05 18	1010	05 20	63.61	05 22	203.49	05 24	48.70
11 901		23 99 11 901	05 26	592.6	05 28	39.89	05 30	30.17	06 01	8.46	06 03	96.50
11 902		23 99 11 902	05 26	38.67	05 28	23.46	05 30	19.98	06 01	67.75	06 03	91.95
11 903		23 99 11 903	05 26	52.91	05 28	37.13	05 30	29.89	06 01	305.70	06 03	108.85
11 904		23 99 11 904	05 26	154.77	05 28	34.13	05 30	32.58	06 01	54.56	06 03	82.61
11 901		23 99 11 901	06 05	89.99	06 07	92.28	06 09	36.58	06 11	58.63	06 13	37.56
11 902		23 99 11 902	06 05	115.63	06 07	83.62	06 09	36.93	06 11	137.36	06 13	33.46
11 903		23 99 11 903	06 05	696.03	06 07	100.81	06 09	35.99	06 11	165.74	06 13	42.17
904		23 99 11 904	06 05	77.79	06 07	58.54	06 09	28.41	06 11	1010	06 13	1010
11 901		23 99 11 901	06 15	121.25	*		06 19	48.86	06 21	33.48	06 23	36.16
11 902		23 99 11 902	06 15	146.13	06 17	54.62	06 19	44.63	06 21	31.94	*	
11 903		23 99 11 903	06 15	192.32	06 17	166.63	06 19	50.30	06 21	56.10	*	
11 904		23 99 11 904	06 15	1010	*		06 19	71.35	06 21	29.03	06 23	24.59
11 901		23 99 11 901	06 25	30.36	06 27	42.33	06 29	87.77	07 01	298.43	07 03	62.00
11 902		23 99 11 902	06 25	33.43	06 27	46.17	06 29	138.48	07 01	52.67	07 03	96.71
11 903		23 99 11 903	06 25	29.02	06 27	76.59	06 29	37.76	07 01	47.89	07 03	212.48
11 904		23 99 11 904	06 25	39.87	06 27	39.88	06 29	73.98	07 01	200.26	07 03	64.92

Power Factor  
 Power Factor  
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Power Factor  
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 Power Factor

**AIR QUALITY DATA**  
**DIVISION OF AIR POLLUTION CONTROL**  
**INCUBATOR DEPARTMENT OF MUNICIPAL AFFAIRS**

(Name)					
Pollutant					
(Code)					
(2-6)	1	1	0	1	

Agency	Project	Time
5 (7)	0 2 (8-9)	7 (10)

Year	Method	Units
(11-12)	91	01
(13-14)		
(15-16)		

DP 0 (47)

Note: DP = number of digits to right of decimal

MASS No. 20- Site	STATION NAME	STATION CODE			Sample Date	Value	Sample Date	Value	Sample Date	Value	Sample Date	Value	Sample Date	Value	Sample Date	Value	Sample Date	Value	
		State	Station	Site	Month (18-26)	Day (27-28) (29-30)	(31-34)	Month (35-36)	Day (37-38)	(39-42)	Month (43-44)	Day (45-46)	(47-50)	Month (51-52)	Day (53-54)	(55-58)	Month (59-60)	Day (61-62)	(63-65)
11 901		23	99	11 901	07	05	48.03	07	07	175.20	07	09	41.30	07	11	72.20	07	13	101
11 902		23	99	11 902	07	05	53.64	07	07	32.54	07	09	47.21	07	11	85.36	07	13	53.90
11 903		23	99	11 903	07	05	54.88	07	07	212.46	07	09	56.71	07	11	95.98	07	13	62.69
11 904		23	99	11 904	07	05	59.32	07	07	144.15	07	09	56.09	07	11	67.00	07	13	47.54
																	Power	On	
1 901		23	99	11 901	07	15	40.93	07	17	97.63	07	19	67.22	07	21	27.46	07	23	87.66
1 902		23	99	11 902	07	15	205.72	07	17	86.31	07	19	74.99	07	21	25.22	07	23	169.51
1 903		23	99	11 903	07	15	211.74	07	17	135.79	07	19	75.66	07	21	24.19	07	23	593.38
11 904		23	99	11 904	07	15	1010	07	17	1010	07	19	1010	07	21	1010	07	23	58.52
11 901		23	99	11 901	07	25	75.03	07	27	80.60	07	29	23.69	07	31	60.51	08	02	81.87
11 902		23	99	11 902	07	25	92.81	07	27	35.97	07	29	13.77	07	31	184.96	08	02	92.71
11 903		23	99	11 903	07	25	100.69	07	27	21.68	07	29	16.31	07	31	132.04	08	02	109.40
11 904		23	99	11 904	07	25	1010	07	27	1010	07	29	1010	07	31	1010	08	02	1010
11 901		23	99	11 901	08	04	64.07	08	06	55.28	08	08	17.15	08	10	50.14	08	12	79.02
11 902		23	99	11 902	08	04	84.18	08	06	55.30	08	08	16.94	08	10	82.97	08	12	1010
1 903		23	99	11 903	08	04	132.00	08	06	59.03	08	08	18.07	08	10	69.94	08	12	1010
11 904		23	99	11 904	08	04	1010	08	06	1010	08	08	1010	08	10	1010	08	12	1010
11 901		23	99	11 901	08	14	1010	08	16	1010	08	18	1010	08	20	42.28	08	22	78.50
11 902		23	99	11 902	08	14	82.29	08	16	19.65	08	18	93.77	08	20	38.92	08	22	79.04
11 903		23	99	11 903	08	14	105.07	08	16	18.82	08	18	45.86	08	20	110.73	08	22	72.67
11 904		23	99	11 904	08	14	1010	08	16	1010	08	18	1010	08	20	87.88	08	22	81.93

**DIVISION OF AIR POLLUTION CONTROL  
AIR QUALITY DATA**

**2 (Notes)**

**Politeness**

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(2-0)

【例 1】

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**NOTE: 17 - number of digits to right of decimal point.**

[illegible]

DEPARTMENT OF  
ATTORNEY GENERAL

MEMORANDUM

November 16, 1982

TO: Gary Marx  
Environmental Enforcement Division  
Department of Natural Resources

FROM: Thomas F. Schimpf  
Assistant Attorney General  
Environmental Protection Division

RE: Michigan Standard Alloys - 11/16/82 Consent Order

Attached is a true copy of the Consent Order, which Judge Burkholz entered today in Berrien Circuit Court. Our original copy of the appendices is in our litigation file.

I trust that this Order will, at long last, resolve this matter. As I have commented to you more than once, I am surprised at Michigan Standard's abrupt change of heart - what was impossible was now readily agreed to.

In short, Michigan Standard Alloys has agreed to do everything we demanded. The entire area excavated must be reseeded according to MDOT specifications, positive erosion control will be installed, and the remaining dross/plant garbage excavated and removed.

Please arrange to have someone in the DNR placed in charge of the work to be done next spring at the former MSA plant site. Creager emphasized again that he wants to be advised if the DNR representative is unhappy with anything done or not done by MSA's contractors. Based on his past experience, Gerry Heyt is, of course, the most likely candidate. I am aware, however, that Berrien County will, come the latest DNR reorganization, be outside of his "sphere of influence". Nevertheless, I suggest that he continue as the on-site representative due to his experience with the file, site, and the personalities involved.

TFS:sje

Attachment

cc Gerry Heyt  
Dennis Drake  
De Montgomery

STATE OF MICHIGAN

IN THE CIRCUIT COURT FOR THE COUNTY OF BERRIEN

THE PEOPLE OF THE STATE OF  
MICHIGAN by FRANK J. KELLEY,  
Attorney General of the State  
of Michigan; FRANK J. KELLEY,  
ex rel MICHIGAN NATURAL  
RESOURCES COMMISSION; Frank J.  
Kelley, ex rel MICHIGAN WATER  
RESOURCES COMMISSION, and HOWARD  
A. TANNER, Director of the  
Michigan Department of Natural  
Resources,

Plaintiffs,

v

File No. 79-1225-CZ-Z

MICHIGAN STANDARD ALLOYS, a  
Michigan Corporation,

Defendant.

CONSENT ORDER

At the session of the Court held in  
the Circuit Courtroom, St. Joseph,  
County of Berrien, Michigan on  
NOV. 16, 1982.

PRESENT: HONORABLE ZOE BURKHOLZ, Circuit Judge.

The parties having agreed by their approval as to  
form and content that this Consent Order may be entered  
in this cause, incorporating the following terms and  
conditions, and the Court being fully advised in the  
premises:

The Court finds that the terms and conditions of this  
Consent Order are reasonable and that they resolve all re-  
maining matters at issue in this cause.

IT IS, THEREFORE, ORDERED:

1. Michigan Standard Alloys, Inc. (hereinafter, Michigan Standard) shall install the erosion/drainage control program set out in Appendix A and B to this Consent Order.

2. Michigan Standard shall control soil erosion by implementing the planting and cover program to establish a suitable vegetative cover on all areas excavated pursuant to the May 5, 1981 Consent Judgment as set out in Appendix A and B to this Consent Order.

3. Michigan Standard shall remove and dispose of all dross residues and any other intermixed materials located in the areas indicated on Appendix C to this Consent Order. Michigan Standard shall remove the dross residues and any other intermixed material in a manner acceptable to the Michigan Department of Natural Resources and shall excavate to the virgin soil as approved by the DNR on-site representative. Michigan Standard shall dispose the excavated materials at a landfill approved by the Department of Natural Resources.

4. Michigan Standard shall start the work specified by this Consent Order no later than May 15, 1983 and complete the work as expeditiously as possible, but no later than August 15, 1983. Michigan Standard shall, however, install the swale basins as described in Appendix A and place straw bales at all catch basins to control surface run-off no later than December 15, 1982.

5. Should climatological conditions prevent strict compliance with this Consent Order's work start and completion deadlines, the parties agree and the Court so orders, that a

reasonable extension of the deadlines shall be given to Defendant by Plaintiffs.

6. Paragraph 24 of the Consent Judgment originally filed in this matter on May 5, 1981 is re-incorporated herein.

ZOE S. BURKHOLZ  
P11422

HONORABLE ZOE BURKHOLZ  
Circuit Judge

APPROVED AS TO FORM AND  
CONTENT:

Thomas F. Schimpf  
Thomas F. Schimpf (P23068)  
Assistant Attorney General  
Attorney for Plaintiffs

Harry J. Creager  
Harry J. Creager (P12331)  
Attorney for Defendant

STATE OF MICHIGAN  
CIRCUIT COURT FOR COUNTY OF BERRIEN  
I certify that I have compared this copy with  
the original on file in this court & that it is a  
correct copy of the whole of such original.

NOV 16 1982

FORREST H. KESTERKE, Clerk

By Shane Norton  
Deputy Clerk